

NEWS 24 NOV 20 CA/CAPplus patent kind codes will be updated
NEWS 25 DEC 01 CAS REGISTRY updated with new ambiguity codes
NEWS 26 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 27 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 28 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and
functionality

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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FULL ESTIMATED COST	0.21	0.21

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DICTIONARY FILE UPDATES: 13 DEC 2006 HIGHEST RN 915360-23-5

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=> log y

10817271.trn

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

1.32

1.53

STN INTERNATIONAL LOGOFF AT 06:51:07 ON 15 DEC 2006

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Welcome to STN International! Enter x:x

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NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 AUG 09 INSPEC enhanced with 1898-1968 archive
NEWS 4 AUG 28 ADISCTI Reloaded and Enhanced
NEWS 5 AUG 30 CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 6 SEP 11 CA/CAplus enhanced with more pre-1907 records
NEWS 7 SEP 21 CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS 8 SEP 25 CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS 9 SEP 25 CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 10 SEP 25 CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 11 SEP 28 CEABA-VTB classification code fields reloaded with new classification scheme
NEWS 12 OCT 19 LOGOFF HOLD duration extended to 120 minutes
NEWS 13 OCT 19 E-mail format enhanced
NEWS 14 OCT 23 Option to turn off MARPAT highlighting enhancements available
NEWS 15 OCT 23 CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 16 OCT 23 The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS 17 OCT 30 CHEMLIST enhanced with new search and display field
NEWS 18 NOV 03 JAPIO enhanced with IPC 8 features and functionality
NEWS 19 NOV 10 CA/CAplus F-Term thesaurus enhanced
NEWS 20 NOV 10 STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 21 NOV 13 CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 22 NOV 20 CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 23 NOV 20 CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 24 NOV 20 CA/CAplus patent kind codes will be updated
NEWS 25 DEC 01 CAS REGISTRY updated with new ambiguity codes
NEWS 26 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 27 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 28 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and functionality

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=> file reg		
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	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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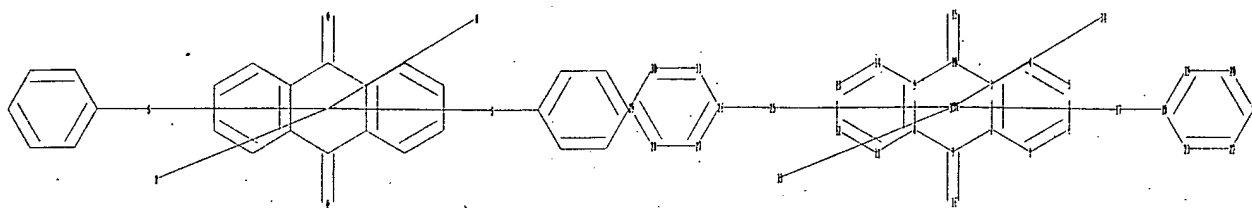
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=>
Uploading C:\Program Files\Stnexp\Queries\10817271\Struc 3.str



chain nodes :

15 16 17 25 33 34

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 18 19 20 21 22 23 26 27 28
29 30 31

chain bonds :

7-16 10-15 17-18 25-26

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-10 4-5 5-6 7-8 8-9 8-11 9-10 9-14 11-12 12-13
13-14 18-19 18-23 19-20 20-21 21-22 22-23 26-27 26-31 27-28 28-29 29-30
30-31

exact/norm bonds :

2-7 3-10 7-8 7-16 9-10 10-15 17-18 25-26

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-11 9-14 11-12 12-13 13-14 18-19 18-23
19-20 20-21 21-22 22-23 26-27 26-31 27-28 28-29 29-30 30-31

Match level :

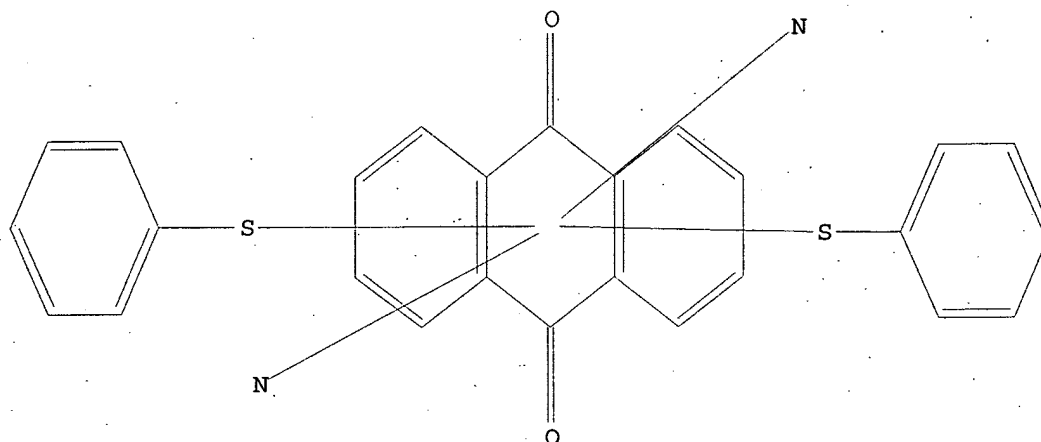
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11:Atom 12:Atom 13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:CLASS 26:Atom 27:Atom 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:CLASS 34:CLASS 35:Atom 36:Atom

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> l1

SAMPLE SEARCH INITIATED 07:20:22 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1426 TO ITERATE

100.0% PROCESSED 1426 ITERATIONS 25 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 26255 TO 30785
PROJECTED ANSWERS: 200 TO 800

L2 25 SEA SSS SAM L1

=> l1 full

FULL SEARCH INITIATED 07:20:31 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 27776 TO ITERATE

100.0% PROCESSED 27776 ITERATIONS 431 ANSWERS
SEARCH TIME: 00.00.01

L3 431 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	166.94	167.15

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=> l3

L4 60 L3

=> d ibib abs hitstr 60

L4 ANSWER 60 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN

ACCESSION NUMBER: 1950:42387 CAPLUS

DOCUMENT NUMBER: 44:42387

ORIGINAL REFERENCE NO.: 44:8127a-f

TITLE: New dye intermediates of the anthraquinone series

INVENTOR(S): Coffey, Samuel; Lodge, Frank; Wardleworth, James

PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 623997		19490526	GB	

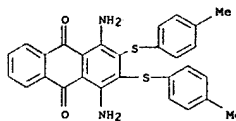
AB New anthraquinone derivs. are manufactured with 1 or more Cl, Br, CH₃ groups which comprises chloro- or bromo-methylating anthraquinone derivs. and which carry 1 or more pendant aryl groups attached directly or through -O-, -S-, -CONH-, or -NH- linkages with chloro- or bromo-methylating agents in the presence of H₂SO₄ or AlCl₃. Na 1-amino-4-p-toluidinoanthraquinone-2-sulfonate (I) 50 was dissolved in 98% H₂SO₄ 800 at 5-10°, (ClCH₂)₂O (II) 70 parts added, the mixture heated to 60° in 45 min., and stirred at this temperature for 18 h. The reaction mixture was poured onto ice, the suspended product filtered off, washed with 2% NaCl solution, and dried at 40-50°, yielding a dark blue powder. A similar chloromethyl derivative was obtained when Na 1-amino-4-anilino-2-anthraquinonesulfonate was used instead of I. 1,4-Dianilinoanthraquinone (III) 15 parts was added with stirring to 150 parts of 96% H₂SO₄ at 5°, the mixture stirred until completely dissolved, 40 parts of II added, the mixture heated to 60° in 1 h., and the temperature maintained at 60° for 1 h. The mixture was poured into a mixture of ice and water, the dark green solid in suspension filtered off, washed with cold water, and dried at 40-50°. Similar products were obtained from 1,4-di-p-toluidinoanthraquinone with (BrCH₂)₂O and with (ClCH₂)₂O, or with 1-amino-4-anilino-2-methylanthraquinone and (ClCH₂)₂O, or with 6-p-toluidino-3-methyl-1,9'-anthrapyridone and (BrCH₂)₂O or ClCH₂)₂O, or from 8,17-di-p-toluidinoindanthrone and (ClCH₂)₂O, or from 2-anilino-3-hydroxy-1',2'-pyrazinoanthraquinone and (ClCH₂)₂O, or from 2,8-diphenylanthraquinone-1',2'-(N)-5',6'-(N)-dithiazole and (ClCH₂)₂O, from 1,5-dihydroxy-4-anilinoanthraquinone and (ClCH₂)₂O from 1,4-diamino-2-phenoxyanthraquinone and (ClCH₂)₂O from 2-phenyl-6-anilino-1',9-anthrapyrimidine and (ClCH₂)₂O, and from 1,4-diamino-2,3-bis(p-tolylmercapto)anthraquinone and (ClC-H₂)₂O. Cf. C.A. 33, 1510.6.

IT 154341-16-9, Anthraquinone, 1,4-diamino-2,3-bis(p-tolylthio)- (dyes from)

RN 154341-16-9 CAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 60 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN (Continued)



=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	5.57	172.72
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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=> file caplus

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FULL ESTIMATED COST	0.44	173.16
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.75

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=> d his

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FILE 'REGISTRY' ENTERED AT 07:20:06 ON 15 DEC 2006

L1 STRUCTURE UPLOADED

L2 25 L1

L3 431 L1 FULL

FILE 'CAPLUS' ENTERED AT 07:20:35 ON 15 DEC 2006

L4 60 L3

FILE 'REGISTRY' ENTERED AT 07:21:24 ON 15 DEC 2006

FILE 'CAPLUS' ENTERED AT 07:21:33 ON 15 DEC 2006

=> d ibib abs hitstr 1-59

L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:1228741 CAPLUS
 DOCUMENT NUMBER: 145:497897
 TITLE: Liquid crystal compositions containing dichroic dyes and guest-host liquid crystal displays using them
 INVENTOR(S): Kato, Takashi; Takahisa, Koji
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 32pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006316138	A2	20061124	JP 2005-138482	20050511
US 2006269696	A1	20061130	US 2006-430889	20060510
PRIORITY APPLN. INFO.:			JP 2005-138482	A 20050511

AB The comps. contain host liquid crystals, solids with average particle size 1 nm
 - 10 μ m, and dichroic dyes bearing substituents (Het)j[B1pQ1qB2r]nC1
 [Het = O, S; B1, B2 = arylene, heteroarylene, cyclic aliphatic hydrocarbylene; Q1 = divalent linkage; C1 = (cyclo)alkyl, alkoxy(carbonyl), acyl(oxy); j = 0, 1; n = 1-3; p, q, r = 0-5; p + q = 3-10]. Adsorption of the dichroic dyes on the solids is prevented in the composition. The displays produce high-contrast images with optical

absorption independent from polarization.

IT 853028-31-6

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(guest: liquid crystal comps. containing dichroic dyes and particles

for guest-host liquid crystal displays)

RN 853028-31-6 CAPLUS

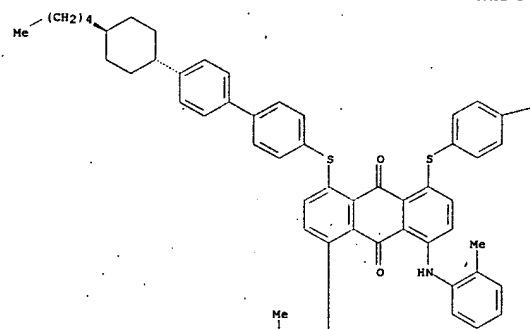
CN 9,10-Anthracenedione, 1-[(2,5-dimethylphenyl)amino]-8-[(2-

methylphenyl)amino]-4,5-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]- (9CI) (CA INDEX NAME)

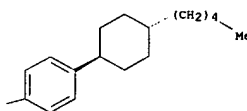
Relative stereochemistry.

L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

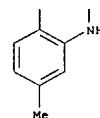
PAGE 1-A



PAGE 1-B



PAGE 2-A



L4 ANSWER 1 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:1060193 CAPLUS
 DOCUMENT NUMBER: 145:407834
 TITLE: Host-guest type color liquid crystal display and method for displaying color image using it
 INVENTOR(S): Kato, Takashi
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 35pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006273879	A2	20061012	JP 2005-90245	20050325
PRIORITY APPLN. INFO.:			JP 2005-90245	20050325

AB The display is equipped with multiple liquid crystal layers with different transition temperature from memory to non-memory status containing ≥ 1 dichroic dyes and host liquid crystals so that light absorption status is reversibly changed by applying heat and elec. field. Color images with high contrast are displayed by heating each of the liquid crystal layers based on the transition temperature in combination with elec. voltage application.

IT 853028-31-6

RL: DEV (Device component use); USES (Uses)
 (dichroic dye; host-guest type color LCD using dichroic dyes)

RN 853028-31-6 CAPLUS

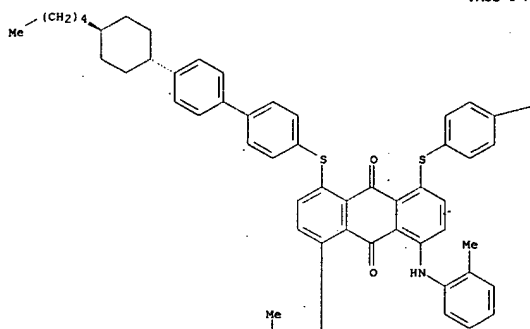
CN 9,10-Anthracenedione, 1-[(2,5-dimethylphenyl)amino]-8-[(2-

methylphenyl)amino]-4,5-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]- (9CI) (CA INDEX NAME)

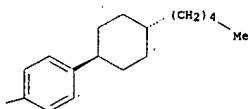
Relative stereochemistry.

L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

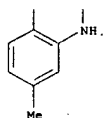
PAGE 1-A



PAGE 1-B



PAGE 2-A



L4 ANSWER 3 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2006:273371 CAPLUS
 DOCUMENT NUMBER: 144:321718
 TITLE: Liquid crystal composition and liquid crystal device
 INVENTOR(S): Takaku, Koji; Katoh, Takashi
 PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan
 SOURCE: U.S. Pat. Appl. Publ., 23 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006060822	A1	20060323	US 2005-228423	20050919
JP 2006083337	A2	20060330	JP 2004-271501	20040917
JP 2006083338	A2	20060330	JP 2004-271502	20040917
PRIORITY APPLN. INFO.:			JP 2004-271501	A 20040917
			JP 2004-271502	A 20040917

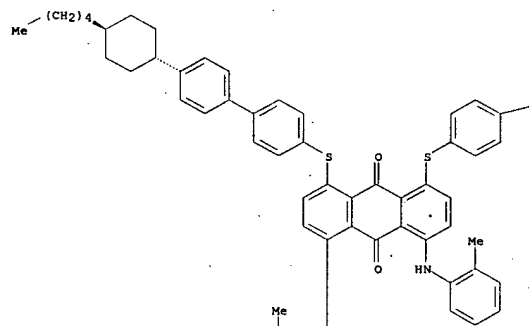
AB Novel liquid crystal compns. are described. One of them comprises at least a dichroic dye having a substituent containing 23 cyclic moieties, and a dual-frequency switchable nematic liquid crystal as a host liquid crystal; and another one comprises a dichroic dye having a substituent containing 23 cyclic moieties, and a liquid crystal comprising at least one nematic liquid crystal compound and at least one chiral agent. A novel liquid crystal device, comprising a pair of electrodes of which at least one is a transparent electrode and a layer between the pair of electrodes comprising one of the liquid crystal compns., is also described.

IT 853028-31-6
 RL: NUU (Other use, unclassified); USES (Uses)
 (liquid crystal composition and liquid crystal device)
 RN 853028-31-6 CAPLUS
 CN 9,10-Anthracenedione, 1-[(2,5-dimethylphenyl)amino]-8-[(2-methylphenyl)amino]-4,5-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]- (9CI) (CA INDEX NAME)

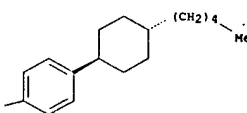
Relative stereochemistry.

L4 ANSWER 2 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

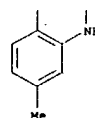
PAGE 1-A



PAGE 1-B



PAGE 2-A



L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:492466 CAPLUS

DOCUMENT NUMBER: 143:35213

TITLE: Anthraquinone compounds, and liquid crystal compositions containing same for guest-host-type liquid crystal displays

INVENTOR(S): Kitagawa, Hirotaka

PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JRXKAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

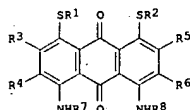
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005145991	A2	20050609	JP 2003-380669	20031111
US 2005173673	A1	20050811	US 2004-984849	20041110
PRIORITY APPLN. INFO.:			JP 2003-380669	A 20031111

OTHER SOURCE(S): MARPAT 143:35213

GI



AB The liquid crystal comps. contain anthraquinone comps. I [R1-2 = (hetero)aryl; R7-8 = aryl; R3-6 = H, substituent] and liquid crystals.

Also claimed are the comps., wherein [at least one of R1-2 = (B1) [(Q)r-(B2)]nCl; B1-2 = divalent (hetero)aryl; Q = divalent connecting group; Cl = (cyclo)alkyl, alkoxy(carbonyl), acyl(oxy); r = 0, 1; n = 1-3].

The comps. show high order parameter and satisfactory absorbance in red region, so that the LCD provides high contrast images.

IT 853028-28-1P 853028-29-2P 853028-30-5P

RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (dichroic dyes; dichroic anthraquinone dyes for liquid crystal comps. for guest-host-type liquid crystal displays)

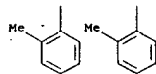
RN 853028-28-1 CAPLUS

CN 9,10-Anthracenedione, 1,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-4-[(4-(1-methylethyl)phenyl)amino]-5-[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)

L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

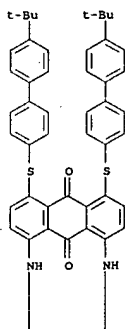
PAGE 2-A



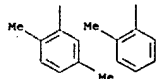
RN 853028-30-5 CAPLUS

CN 9,10-Anthracenedione, 1,8-bis[(4-(1,1-dimethylethyl)[1,1'-biphenyl]-4-yl)thio]-4-[(2,5-dimethylphenyl)amino]-5-[(2-methylphenyl)amino]- (9CI) (CA INDEX NAME)

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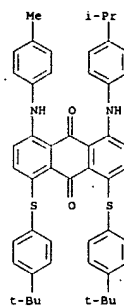
IT 853028-31-6

RL: DEV (Device component use); TEM (Technical or engineered material)

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L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

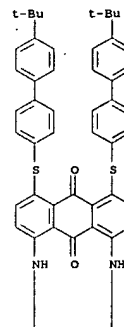
(Continued)



RN 853028-29-2 CAPLUS

CN 9,10-Anthracenedione, 1,8-bis[(4'-(1,1-dimethylethyl)[1,1'-biphenyl]-4-yl)thio]-4,5-bis[(2-methylphenyl)amino]- (9CI) (CA INDEX NAME)

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L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

use); USES (Uses)

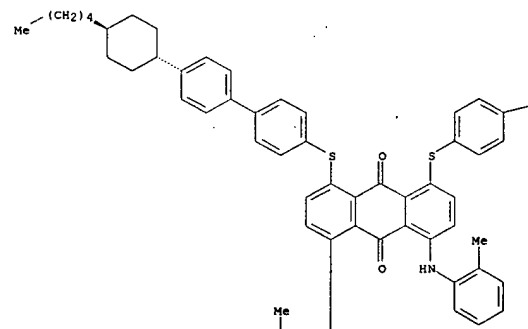
(dichroic dyes; dichroic anthraquinone dyes for liq. crystal comps. for guest-host-type liq. crystal displays)

RN 853028-31-6 CAPLUS

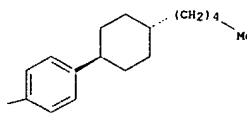
CN 9,10-Anthracenedione, 1-[(2,5-dimethylphenyl)amino]-8-[(2-methylphenyl)amino]-4,5-bis[(4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl)thio]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

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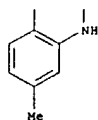


PAGE 1-B



L4 ANSWER 4 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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L4 ANSWER 5 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:198593 CAPLUS
 DOCUMENT NUMBER: 140:243686
 TITLE: Guest-host type liquid crystal display device using dichroic dye
 INVENTOR(S): Kato, Takashi; Toyooka, Kentaro
 PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004075821	A2	20040311	JP 2002-236866	20020815
PRIORITY APPLN. INFO.:			JP 2002-236866	20020815

AB The device involves a pair of substrates made of 21 transparent electrode and 22 liquid crystal layers containing a dichroic dye as a guest and a host liquid crystal, which are placed in the gap between the substrates. At least one of the dichroic dye contains substituent represented as -(Het)_j[(B1)p(Q1)q(B2)r]nCl [(Het) = O, S; B1, B2 = arylene, heteroarylene, alicyclic hydrocarbylene; Q1 = divalent group; Cl = alkyl, cycloalkyl, alkoxy, alkoxy carbonyl, acyloxy; j = 0, 1; p, q, r = 0-5; n = 1-3]. The display provides images with high contrast.

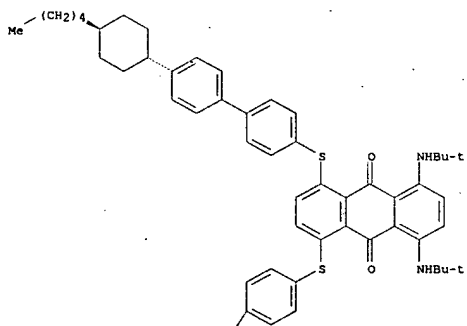
IT 667455-04-1
 RL: TEM (Technical or engineered material use); USES (Uses)
 (guest: guest-host type liquid crystal display device using dichroic dye providing image with high contrast)

RN 667455-04-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis[(1,1-dimethylethyl)amino]-5-[(4-(1,1-dimethylethyl)phenyl)thio]-8-[(4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl)thio]- (SCI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 5 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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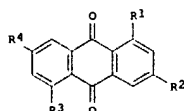
t-Bu

L4 ANSWER 6 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:777898 CAPLUS
 DOCUMENT NUMBER: 139:293421
 TITLE: Anthraquinone dyes, their production and their use
 INVENTOR(S): Lauk, Urs; Nowack, Patric; Arquint, Alfons
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
 SOURCE: PCT Int. Appl., 42 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

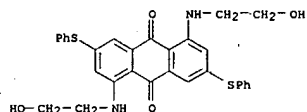
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080735	A1	20031002	WO 2003-EP2615	20030313
M: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GN, KE, LS, MW, MZ, SD, SL, SZ, TG, UG, ZM, ZW, AM, AZ, BY, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2476762	AA	20031002	CA 2003-2476762	20030313
AU 2003227058	A1	20031008	AU 2003-227058	20030313
EP 1487921	A1	20041222	EP 2003-744798	20030313
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003008599	A	20050209	BR 2003-8599	20030313
JP 2005520907	T2	20050714	JP 2003-578473	20030313
CN 1643075	A	20050720	CN 2003-806626	20030313
US 2005177958	A1	20050818	US 2003-508715	20030313
PRIORITY APPLN. INFO.:			EP 2002-405225	A 20020322
			WO 2003-EP2615	W 20030313

OTHER SOURCE(S): MARPAT 139:293421
 GI

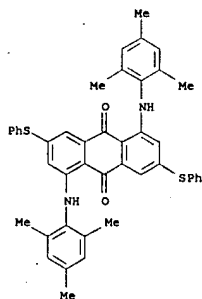


AB The invention relates to anthraquinone dyes (I; R1, R3 = optionally substituted amino, sulfonamido, amido, an ether group, or a monosulfide group; R2, R4 = ether group, monosulfide group), their production, and their use in coloring plastics and in color filters. I have high tinctorial strength and resistance to heat and light. In an example,

L4 ANSWER 6 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 1,3,5,7-tetrabromoanthraquinone was condensed with 2-aminoethanol (1:2)
 and the product further condensed with NaSPH to provide a dye in the form
 of 1,5-bis(2-hydroxyethylamino)-3,7-bis(phenylthio)anthraquinone.
 IT 607402-86-8P 607402-88-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (dye; production of anthraquinone dyes for color filters)
 RN 607402-86-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis[(2-hydroxyethyl)amino]-3,7-bis(phenylthio)-
 (9CI) (CA INDEX NAME)

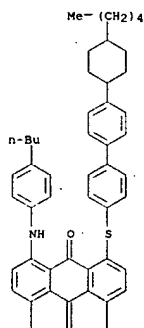


RN 607402-88-0 CAPLUS
 CN 9,10-Anthracenedione, 3,7-bis(phenylthio)-1,5-bis[(2,4,6-trimethylphenyl)amino]- (9CI) (CA INDEX NAME)

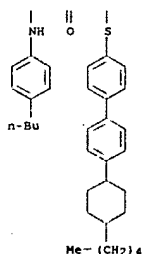


REFERENCE COUNT: 6. THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

L4 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 = H) to give the corresponding anthraquinone deriv. (λ_{max} 455 nm).
 IT 557089-57-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of (hetero)aryl thiols and anthraquinone dyes)
 RN 557089-57-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis[(4-butylphenyl)amino]-5,8-bis[(4'-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]- (9CI) (CA INDEX NAME)



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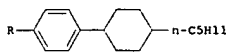
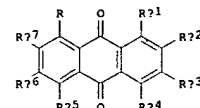


PAGE 2-A

L4 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:525403 CAPLUS
 DOCUMENT NUMBER: 139:102418
 TITLE: (Hetero)aryl thiols, their preparation, and
 preparation of anthraquinone dyes using the thiols
 Kato, Takashi; Yamazaki, Kenji; Okamura, Hisashi
 INVENTOR(S): Fuji Photo Film Co., Ltd., Japan
 PATENT ASSIGNEE(S): Jpn. Kokai Tokkyo Koho, 15 pp.
 SOURCE: CODEN: JK00JAF
 Patent
 DOCUMENT TYPE: Japanese
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003192664	A2	20030709	JP 2002-114955	20020417
PRIORITY APPLN. INFO.:			JP 2001-317818	A 20011016

OTHER SOURCE(S): MARPAT 139:102418
 GI



AB Title dyes I (R₁-R₈ = H, substituent; ≥ 1 R₁-R₈ are SBlqB2qCl;
 B1 = divalent (un)substituted (hetero)aryl; B2 = divalent (un)substituted
 alicyclic hydrocarbyl; C1 = (un)substituted (cyclo)alkyl, alkoxy,
 alkoxycarbonyl, acyl(oxy); p, q = 1-5; (p + q) = 3-10) are prepared by
 chlorosulfonylation of HBlqB2qCl (B1, B2, C1, p, q = same as above),
 reduction
 of the introduced chlorosulfonyl group, and condensation of the obtained
 thiols with I (R₁-R₈ = H, substituent; ≥ 1 R₁-R₈ are leaving
 group). Thus, bromobenzene derivative II (R = Br) was reacted with,
 PhB(OH)₂,
 ClSO₃H, POCl₃, and Zn to give 59% biphenyl thiol derivative II (R =
 4-HSC₆H₄),
 which was condensed with I (R₁ = Cl, R₅ = 4-C₆H₁₃C₆H₄S, R₂-R₄,
 R₆-R₈

L4 ANSWER 7 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 8 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:369077 CAPLUS
 DOCUMENT NUMBER: 138:376523
 TITLE: Guest-host type liquid crystal display devices and method for manufacture thereof
 INVENTOR(S): Kato, Takashi; Toyooka, Kentaro; Okamura, Hisashi
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003138262	A2	20030514	JP 2001-335254	20011031
TW 229766	B1	20050321	TW 2002-91123020	20021004
PRIORITY APPLN. INFO.:			JP 2001-335254	A 20011031

OTHER SOURCE(S): MARPAT 138:376523

AB The title device has a liquid crystal layer, which contains a host liquid crystal and a dichromic dye and has liquid crystals aligning at 60-90, between a pair of substrates, at least one of which is transparent electrodes, wherein the dichromic dye has a substituent $-(\text{Het})_m-[(\text{B}1)_p-(\text{Q}1)_q-(\text{B}2)_r]\text{in}-\text{Cl}(\text{Het} = \text{S}, \text{O}; \text{B}2 = 2\text{-valent aryl, heteroaryl, alicyclic hydrocarbon}; \text{Q}1 = 2\text{-valent connecting group}; \text{C}1 = \text{alkyl, cycloalkyl, alkoxy, etc.}; m = 0, 1; p, q, r = 0-5 \text{ integer}; n = 1-3 \text{ integer})$. The device provides high contrast images.

IT 497952-66-6

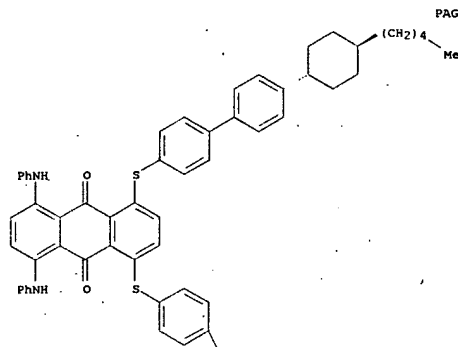
RL: TEM (Technical or engineered material use); USES (Uses) (dichromic dye)

RN 497952-66-6 CAPLUS

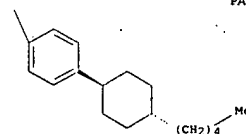
CN 9,10-Anthracenedione, 1,4-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]-5,8-bis(phenylamino)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 8 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



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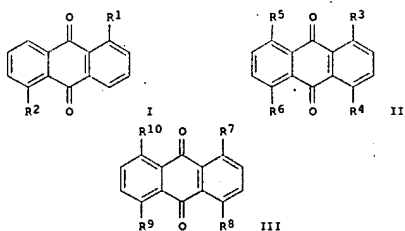
L4 ANSWER 9 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:349563 CAPLUS
 DOCUMENT NUMBER: 138:376514
 TITLE: Liquid crystal compositions containing dyes and liquid crystal displays
 INVENTOR(S): Kato, Takashi; Okamura, Hisashi
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003129055	A2	20030508	JP 2001-325834	20011024
PRIORITY APPLN. INFO.:			JP 2001-325834	20011024

OTHER SOURCE(S): MARPAT 138:376514

GI



AB The comps. contain 21 dye(s) having substitution group $-(\text{Het})_m[(\text{B}1)_p-(\text{Q}1)_q-(\text{B}2)_r]\text{in}-\text{Cl}(\text{Het} = \text{S}, \text{O}; \text{B}1, \text{B}2 = (\text{hetero})\text{aryl, alicyclic hydrocarbon}; \text{Q}1 = \text{bonding group}; \text{C}1 = (\text{cyclo})\text{alkyl, alkoxy, acyl, alkoxy carbonyl, acyloxy}; m = 0, 1; p, q, r = \text{integer of } 0-5; n = \text{integer of } 1-3; (p + r) + n = 3-10$. The dyes including the said substitution group(s) may be anthraquinone dyes. Preferable Markush structures for the dyes I, II, and III [R1, R3, R7 = S(B1pQ1qB2r)inCl; R2, R4-6 = (hetero)arylthio; R8-10 = (hetero)arylthio, (un)substituted amino, acylamino, OH, aryloxy; 21 of R8-10 = (un)substituted amino, acylamino, OH, aryloxy] are given. Liquid crystal devices with 21 liquid crystal layers containing the comps. are also claimed. Liquid crystal displays with high order parameter and high contrast are obtained.

IT 497952-66-6 521087-46-7

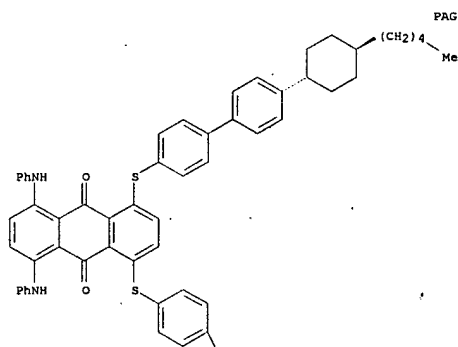
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (liquid crystal comps. containing dyes for displays with high contrast)

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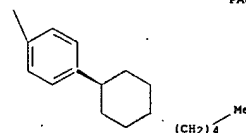
L4 ANSWER 9 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 497952-66-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]-5,8-bis(phenylamino)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



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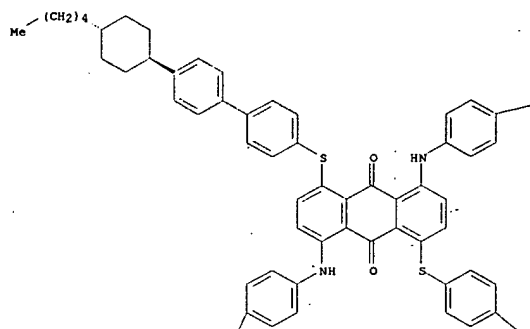
RN 521087-46-7 CAPLUS

CN 9,10-Anthracenedione, 1,5-bis[4'-(1,1-dimethylethyl)phenyl]amino]-4,8-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

L4 ANSWER 9 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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PAGE 2-A

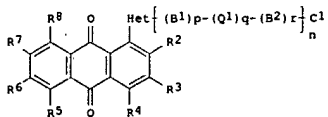
t-Bu

L4 ANSWER 10 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:133386 CAPLUS
 DOCUMENT NUMBER: 138:195973
 TITLE: Anthraquinone compound, liquid crystal composition, cell and display device employing the same
 INVENTOR(S): Okamura, Hisashi; Katoh, Takashi
 PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 78 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003014259	A2	20030220	WO 2002-JP6697	20020702
WO 2003014259	A3	20030703		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, ME, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2004537639	T2	20041216	JP 2003-519192	20020702
TW 574348	B	20040201	TW 2002-91116878	20020729
US 2004232382	A1	20041125	US 2004-485457	20040712
PRIORITY APPLN. INFO.:				
			JP 2001-234465	A 20010802
			JP 2001-281650	A 20010917
			WO 2002-JP6697	W 20020702

OTHER SOURCE(S): MARPAT 138:195973
GI



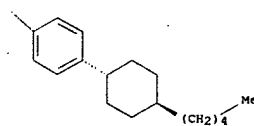
I

AB The present invention relates to anthraquinone compds. and liquid crystal compn for guest-host-type liquid crystal displays. A liquid crystal composition comprises at least one liquid crystal compound and at least one anthraquinone compound represented by formula I (R2-8 = H, substituent: Het = sulfur, oxygen; B1,2 = arylene, heteroarylene, cycloalkan-diyl, cycloalken-diyl; Q1 = bivalent linking group; Cl = alkyl, cycloalkyl, alkoxy,

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L4 ANSWER 9 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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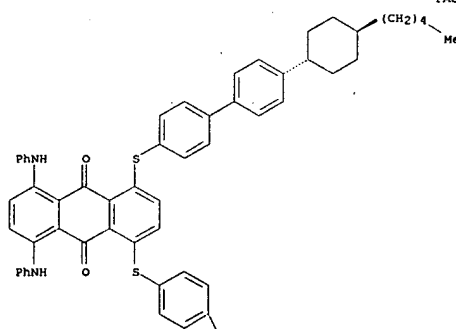


L4 ANSWER 10 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

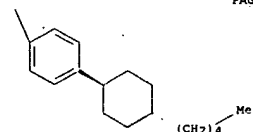
alkoxycarbonyl, acyloxy; p, q and r = 0-5; n = 1-3, satisfying 3 ≤ (p+q+r) ≤ 10).
 IT 497952-66-6
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anthraquinone compound for liquid crystal composition cell and display device)
 RN 497952-66-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis[4'-(trans-4-pentylcyclohexyl)[1,1'-biphenyl]-4-yl]thio]-5,8-bis(phenylamino)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

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L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:946344 CAPLUS

DOCUMENT NUMBER: 138:25849

TITLE: Colored, radiation-curable compositions, curable chromophore and their manufacture for coating of optical fibers

INVENTOR(S): Greer, Robert W.; Gantt, Todd Warren; Purvis, Michael B.; Overton, Bob J.

PATENT ASSIGNEE(S): Alcatel, fr.

SOURCE: PCT Int. Appl., 85 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002098945	A1	20021212	WO 2002-US15950	20020521
W: CN, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 6782176	B1	20040824	US 1999-360951	19990727
US 2002057881	A1	20020516	US 2001-870482	20010601
US 7091257	B2	20060815		
EP 1397408	A1	20040317	EP 2002-737016	20020521
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004530163	T2	20040930	JP 2003-502063	20020521
US 2005084224	A1	20050421	US 2003-478668	20020521
PRIORITY APPLN. INFO.:			US 1999-360951	A2 19990727
			US 2001-870482	A 20010601
			US 2002-356160P	P 20020214
			WO 2002-US15950	W 20020521

AB The color for the title radiation-curable durable, colored coating is at least in part provided by chromophore mols. that are covalently bonded to other components within the radiation-curable composition. An example oligomer

may be prepared from Reactint Yellow X 15, IPDI, 1,6-hexanediol diacrylate

reactive diluent, and 2-hydroxyethyl acrylate.

IT 477978-78-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(colored, radiation-curable compns. of oligomeric urethane acrylate)

RN 477978-78-2 CAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]-9,10-anthracenedione, 2-hydroxyethyl 2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CN 1

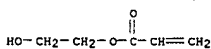
L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

CN 4

CRN 818-61-1

CMF C5 H8 O3



IT 477978-80-6P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(optical fiber inner coating; colored, radiation-curable compns. of oligomeric urethane acrylate)

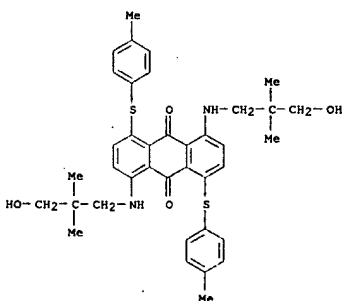
RN 477978-80-6 CAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]-9,10-anthracenedione, 2-carboxyethyl 2-propenoate, Ebecryl 230, 2-hydroxyethyl 2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CN 1

CRN 396715-38-1

CMF C38 H42 N2 O4 S2



CN 2

CRN 74092-50-5

CMF Unspecified

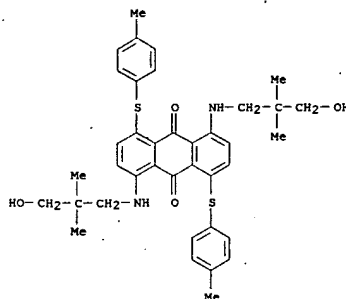
10817271.trn

L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

CRN 396715-38-1

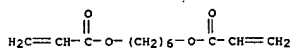
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CN 2

CRN 13048-33-4

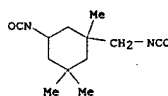
CMF C12 H18 O4



CN 3

CRN 4098-71-9

CMF C12 H18 N2 O2



L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

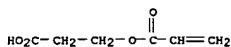
CCI PMS, MAN

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CN 3

CRN 24615-84-7

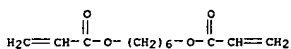
CMF C6 H8 O4



CN 4

CRN 13048-33-4

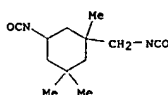
CMF C12 H18 O4



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CRN 4098-71-9

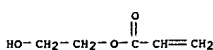
CMF C12 H18 N2 O2



CN 6

CRN 818-61-1

CMF C5 H8 O3



IT 477978-79-3P

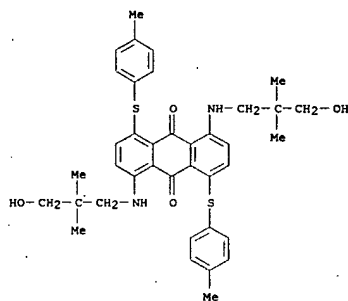
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(optical fiber outer coating; colored, radiation-curable compns. of

L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 oligomeric urethane acrylate)
 RN 477978-79-3 CAPLUS
 CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]-9,10-anthracenedione, Ebecryl 4827, 2-hydroxyethyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 396715-38-1
 CMF C38 H42 N2 O4 S2



CM 2

CRN 136752-28-8
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

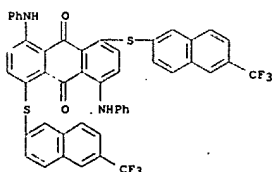
CM 3

CRN 42978-66-5
 CMF C15 H24 O6
 CCI IDS

L4 ANSWER 12 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:671980 CAPLUS
 DOCUMENT NUMBER: 137:208486
 TITLE: Guest-host liquid crystal composition and guest-host liquid crystal display device
 INVENTOR(S): Iwanaga, Hiroki; Nakai, Yutaka; Naito, Katsuyuki
 PATENT ASSIGNEE(S): Kabushiki Kaisha Toshiba, Japan
 SOURCE: Eur. Pat. Appl., 50 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

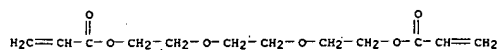
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1236786	A1	20020904	EP 2002-4338	20020301
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2002327176	A2	20021115	JP 2001-388326	20011220
US 2002192398	A1	20021219	US 2002-84064	20020228
US 6656542	B2	20031202	JP 2001-57175	A 20010301
PRIORITY APPLN. INFO.:			JP 2001-388326	A 20011220

OTHER SOURCE(S): MARPAT 137:208486
 AB Disclosed is a guest-host liquid crystal composition, comprising a host liquid crystal material and a dichroic dye mixed as a guest in the host liquid crystal material. The liquid crystal material has a condensed ring in its mol. structure, and the dichroic dye is a compound having a condensed ring bonded to the basic skeleton as a substituent.
 IT 452921-54-9P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (dichroic dye: guest-host liquid crystal composition for guest-host liquid crystal display device containing)
 RN 452921-54-9 CAPLUS
 CN 9,10-Anthracenedione, 1-[(7-methyl-2-naphthalenyl)thio]-4,8-bis(phenylamino)-5-[(6-(trifluoromethyl)-2-naphthalenyl)thio]- (9CI) (CA INDEX NAME)



10817271.trn

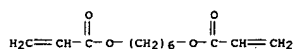
L4 ANSWER 11 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



3 (DI-Me)

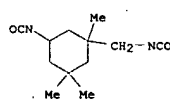
CM 4

CRN 13048-33-4
 CMF C12 H18 O4



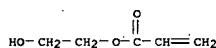
CM 5

CRN 4098-71-9
 CMF C12 H18 N2 O2



CM 6

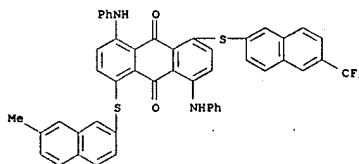
CRN 818-61-1
 CMF C5 H8 O3



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
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L4 ANSWER 12 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

IT 452921-57-2
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dichroic dye: guest-host liquid crystal composition for guest-host liquid crystal display device containing)
 RN 452921-57-2 CAPLUS
 CN 9,10-Anthracenedione, 1-[(7-methyl-2-naphthalenyl)thio]-4,8-bis(phenylamino)-5-[(6-(trifluoromethyl)-2-naphthalenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
 FORMAT

L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:429546 CAPLUS

DOCUMENT NUMBER: 137:21500

TITLE: Thermally stable anthraquinone colorants containing copolymerizable vinyl groups and polymeric coating compositions based on them

INVENTOR(S): Cyr, Michael John; Weaver, Max Allen; Rhodes, Gerry Foust; Pearson, Jason Clay; Cook, Phillip Michael; De Wit, Jos Simon; Johnson, Larry Keith

PATENT ASSIGNEE(S): Eastman Chemical Co., USA

SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U.S. Ser. No. 633,548, abandoned.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002068725	A1	20020606	US 2001-911789	20010724
US 6689828	B2	20040210		
WO 2002012401	A2	20020214	WO 2001-US23705	20010730
WO 2002012401	A3	20020418		
W: CN, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1307517	A2	20030507	EP 2001-961769	20010730
EP 1307517	B1	20060906		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004506062	T2	20040226	JP 2002-517695	20010730
AT 338792	E	20060915	AT 2001-961769	20010730
US 2004102637	A1	20040527	US 2003-719268	20031121
US 6870063	B2	20050322		
US 2004110812	A1	20040610	US 2003-719883	20031121
US 6870062	B2	20050322		
US 2004122072	A1	20040624	US 2003-719427	20031121
US 6787658	B2	20040907		
US 2004142995	A1	20040722	US 2003-734630	20031212
US 7141685	B2	20061128		

PRIORITY APPLN. INFO.:

US 2000-633548 B2 20000807

US 2001-911789 A 20010724

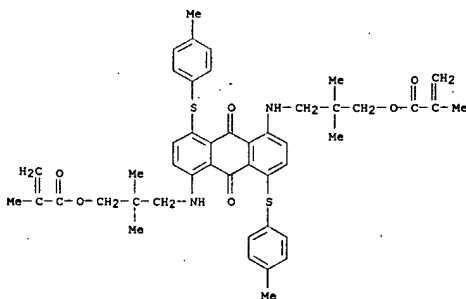
WO 2001-US23705 W 20010730

OTHER SOURCE(S): MARPAT 137:21500

AB Disclosed are thermally stable anthraquinone dyes containing 21 vinyl group(s) which render the compds. copolymerizable with reactive vinyl monomers to produce colored, polymeric compns. such as acrylic polymer materials. The dyes possess good fastness to UV light, good solubility

in vinyl monomers, good color strength, and excellent thermal stability. Coating compns. are based on 21 reactive vinyl monomer(s), 21 vinyl dye(s), and a photoinitiator. In an example,

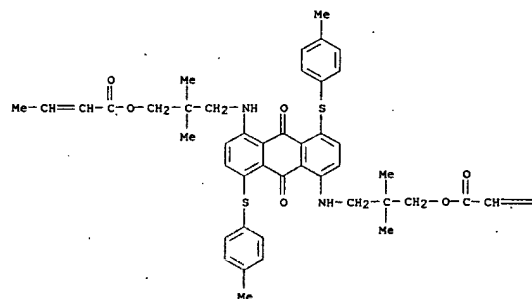
L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 396715-30-3 CAPLUS

CN 2-Butenoic acid, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

1,5-bis(2-carboxyphenylthio)anthraquinone was diesterified with 4-vinylbenzyl chloride to give a yellow bis(4-vinylbenzyl) ester.

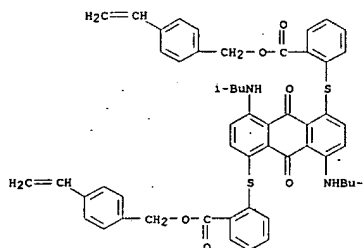
IT 396715-19-8P 396715-27-8P 396715-30-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(blue dye; production and polymerization of thermally stable anthraquinone dye monomers)

RN 396715-19-8 CAPLUS

CN Benzoic acid, 2,2'-[[[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, bis[(4-ethenylphenyl)methyl] ester (9CI) (CA INDEX NAME)



RN 396715-27-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-B

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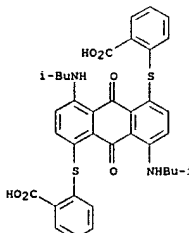
IT 208656-88-6 396715-38-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(dye monomer starting material; production and polymerization of thermally stable anthraquinone dye monomers)

RN 208656-88-6 CAPLUS

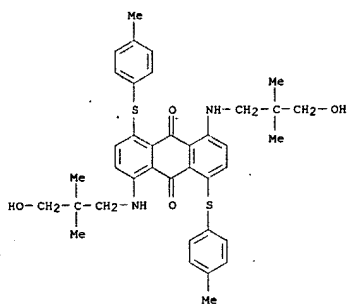
CN Benzoic acid, 2,2'-[[[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, bis[(4-methylphenyl)thio] ester (9CI) (CA INDEX NAME)



RN 396715-38-1 CAPLUS

CN 9,10-Anthracenedione, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio] ester (9CI) (CA INDEX NAME)

L4 ANSWER 13 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

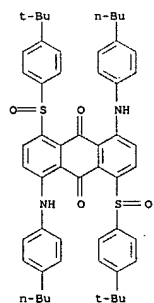


L4 ANSWER 14 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:270705 CAPLUS
 DOCUMENT NUMBER: 136:311216
 TITLE: Dichroic pigments and liquid-crystal display devices using them
 INVENTOR(S): Iwanaga, Hironori; Naito, Katsuyuki; Kato, Makoto
 PATENT ASSIGNEE(S): Toshiba Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

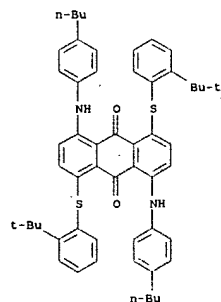
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002105345	A2	20020410	JP 2000-296353	20000928
PRIORITY APPLN. INFO.: JP 2000-296353 20000928				

OTHER SOURCE(S): MARPAT 136:311216
 AB The pigments are of anthraquinone derivs. which have anisotropic absorption for visible lights in the mol. long axis direction and short axis direction and contain S, Se or/and Te provided at least 1 of these elements has a valency of 23 and links to O or electron attracting groups. The pigments are encapsulated prior to use. An example of the pigments was 1,5-bis(2-tert-butylphenylthio)-4,8-bis(phenylsulfoxy)anthraquinone.
 IT 409366-37-6 409366-38-7
 RL: PRP (Properties): TEM (Technical or engineered material use); USES (Uses)
 (pigments; dichroic pigments and liquid-crystal display devices using them)
 RN 409366-37-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis[(4-butylphenyl)amino]-4,8-bis[(4-(1,1-dimethylethyl)phenyl)sulfinyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 14 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 409366-38-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis[(4-butylphenyl)amino]-4,8-bis[(2-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)



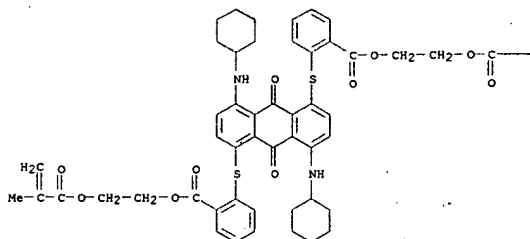
L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:123136 CAPLUS
 DOCUMENT NUMBER: 136:168964
 TITLE: Photopolymerizable dyes and their production
 INVENTOR(S): Cyr, Michael John; Weaver, Max Allen; Rhodes, Gerry
 Foust, Pearson, Jason Clay; Cook, Phillip Michael; De Wit, Jos Simon; Johnson, Larry Keith
 PATENT ASSIGNEE(S): Eastman Chemical Company, USA
 SOURCE: PCT Int. Appl., 112 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012402	A2	20020214	WO 2001-US24634	20010806
WO 2002012402	A3	20021017		
W: JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002132874	A1	20020919	US 2001-920904	20010802
US 6727372	B2	20040427		
EP 1307515	A2	20030507	EP 2001-957464	20010806
EP 1307515	B1	20060628		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004050663	T2	20040226	JP 2002-517696	20010806
AT 331763	E	20060715	AT 2001-957464	20010806
US 2004059124	A1	20040325	US 2003-654103	20030903
US 7030244	B2	20060418		
US 2004059014	A1	20040325	US 2003-654175	20030903
US 7060829	B2	20060613		
US 2006052589	A1	20060309	US 2005-249578	20051013
US 2006052469	A1	20060309	US 2005-249793	20051013
US 7138539	B2	20061121		
PRIORITY APPLN. INFO.: US 2000-223521P P 20000807				
US 2001-920904 A 20010802				
WO 2001-US24634 W 20010806				

AB Disclosed are novel dyes compds. which contain one or more photopolymerizable vinyl groups which may be copolymerized (or cured) with ethylenically unsatd. monomers to produce colored compns. with good color fastness. In an example, a red dye was obtained by diesterifying 1,5-bis(2-carboxyphenylthio)anthraquinone with 4-vinylbenzyl chloride.
 IT 396732-72-2
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (blue dye; production of photopolymerizable dyes)
 RN 396732-72-2 CAPLUS
 CN Benzoic acid,
 2,2'-[[4,8-bis(cyclohexylamino)-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-A

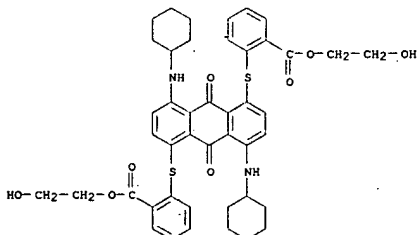


PAGE 1-B

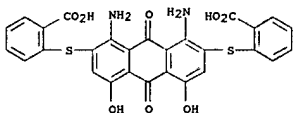


IT 396715-19-8P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (blue dye; production of photopolymerizable dyes containing vinylic groups)
 RN 396715-19-8 CAPLUS
 CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, bis[(4-ethenylphenyl)methyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 anthracenediyl]bis(thio)]bis-, bis(2-hydroxyethyl) ester (9CI) (CA INDEX NAME)

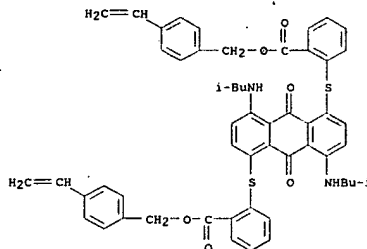


IT 208657-17-4 396732-70-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; production of photopolymerizable dyes)
 RN 208657-17-4 CAPLUS
 CN Benzoic acid,
 2,2'-[([1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl]bis(thio)]bis- (9CI) (CA INDEX NAME)

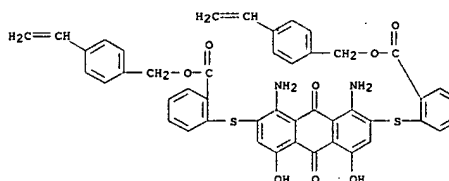


RN 396732-70-0 CAPLUS
 CN Benzoic acid,
 2,2'-[([4,8-bis(cyclohexylamino)-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

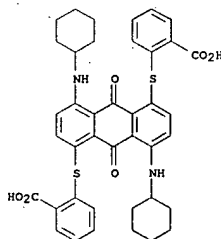


IT 396732-64-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cyan dye; production of photopolymerizable dyes)
 RN 396732-64-2 CAPLUS
 CN Benzoic acid,
 2,2'-[([1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl]bis(thio)]bis-, bis[(4-ethenylphenyl)methyl] ester (9CI) (CA INDEX NAME)

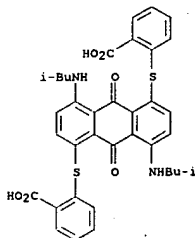


IT 396732-71-1P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
 RACT
 (Reactant or reagent)
 (intermediate; production of photopolymerizable dyes)
 RN 396732-71-1 CAPLUS
 CN Benzoic acid,
 2,2'-[([4,8-bis(cyclohexylamino)-9,10-dihydro-9,10-dioxo-1,5-

L4 ANSWER 15 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



IT 208656-88-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; production of photopolymerizable dyes containing vinylic groups)
 RN 208656-88-6 CAPLUS
 CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2002:123135 CAPLUS

DOCUMENT NUMBER:

136:168967

TITLE:

Thermally stable anthraquinone dyes containing copolymerizable vinyl groups and photocurable coating compositions therefrom

INVENTOR(S):

Cyr, Michael John; Weaver, Max Allen; Rhodes, Gerry; Foust, Pearson; Jason Clay; Cook, Phillip Michael; De Wit, Jos Simon; Johnson, Larry Keith

PATENT ASSIGNEE(S):

Eastman Chemical Company, USA

SOURCE:

PCT Int. Appl., 61 pp.

DOCUMENT TYPE:

CODEN: PIXXD2

LANGUAGE:

Patent

FAMILY ACC. NUM. COUNT:

English

PATENT INFORMATION:

3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012401	A2	20020214	WO 2001-US23705	20010730
WO 2002012401	A3	20020418		
W: CN, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002068725	A1	20020606	US 2001-911789	20010724
US 6689828	B2	20040210		
EP 1307517	A2	20030507	EP 2001-961769	20010730
EP 1307517	B1	20060906		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004506062	T2	20040226	JP 2002-517695	20010730
PRIORITY APPLN. INFO.:				US 2000-633548 A 20000807
				US 2001-911789 A 20010724
				WO 2001-US23705 W 20010730

OTHER SOURCE(S):

MARPAT 136:168967

AB

Disclosed are thermally stable anthraquinone dyes which contain one or more vinyl groups which render the compds. copolymerizable with reactive vinyl comonomers to produce colored, polymeric compns. The dyes possess good fastness to UV light, good solubility in the comonomers, good color strength, and excellent thermal stability. In an example, 1,5-bis(2,2-dimethyl-3-hydroxypropylamino)anthraquinone was diesterified with methacrylic anhydride to give a red dye which could be photopolymerized with acrylic comonomers to give red coating materials.

IT

396715-19-8P 396715-27-8P 396715-30-3P

RI: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

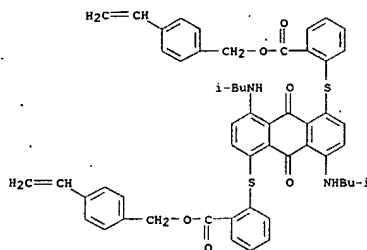
(blue dye; production of polymerizable anthraquinone dyes for photocurable coatings)

RN 396715-19-8 CAPLUS

CN

Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis-, bis[(4-ethenylphenyl)methyl] ester (9CI) (CA INDEX NAME)

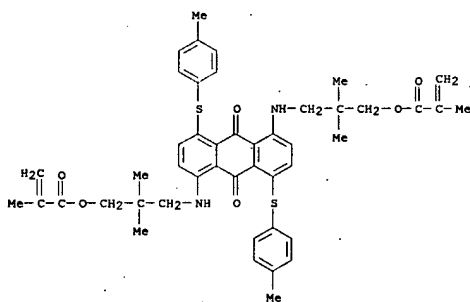
L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 396715-27-8 CAPLUS

CN

2-Propenoic acid, 2-methyl-, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)



RN 396715-30-3 CAPLUS

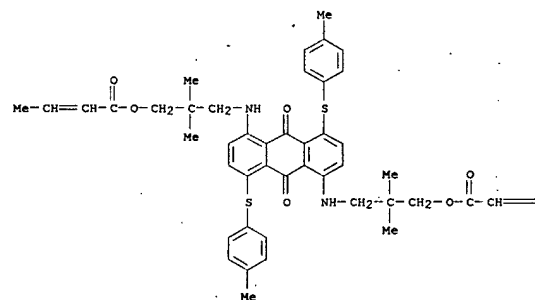
CN

2-Butenoic acid, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

PAGE 1-A



PAGE 1-B

=CH-Me

IT

208656-88-6 396715-38-1

RI: RCT (Reactant); RACT (Reactant or reagent)

(starting material; production of polymerizable anthraquinone dyes for photocurable coatings)

RN

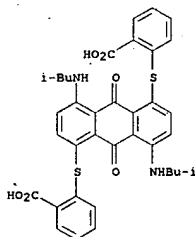
208656-88-6 CAPLUS

CN

Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis- (9CI) (CA INDEX NAME)

L4 ANSWER 16 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

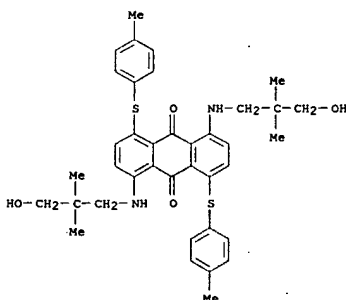
(Continued)



RN 396715-38-1 CAPLUS

CN

9,10-Anthracenedione, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

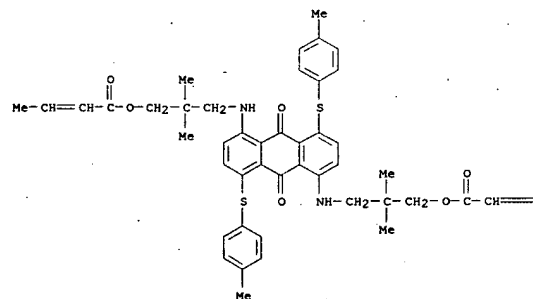
ACCESSION NUMBER: 2002:123134 CAPLUS
 DOCUMENT NUMBER: 136:185321
 TITLE: Thermally stable anthraquinone dyes containing copolymerizable vinyl groups, and polymers therefrom
 INVENTOR(S): Cyr, Michael John; Weaver, Max Allen; Rhodes, Gerry Foust; Pearson, Jason Clay; Cook, Phillip Michael
 PATENT ASSIGNEE(S): Eastman Chemical Company, USA
 SOURCE: PCT Int. Appl., 50 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012400	A2	20020214	WO 2001-US20347	20010627
WO 2002012400	A3	20020418		
W: CA, JP, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
EP 1307514	A2	20030507	EP 2001-950510	20010627
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004506061	T2	20040226	JP 2002-517694	20010627
PRIORITY APPLN. INFO.:			US 2000-633548	A 20000807
			WO 2001-US20347	W 20010627

OTHER SOURCE(S): MARPAT 136:185321
 AB Disclosed are thermally stable, anthraquinone dyes which contain one or more vinyl groups which render the dyes copolymerizable with reactive vinyl monomers to produce colored, polymeric compns. such as methacrylate polymeric materials. The dyes possess fastness to UV light, good solubility in vinyl monomers, good color strength, and excellent thermal stability. Also disclosed are acrylic polymers derived from acrylic acid esters, methacrylic acid esters and/or other copolymerizable vinyl compds., having copolymd. therein one or more of the anthraquinone colorant compds. In an example, a yellow copolymerizable dye was prepared by esterifying 1,5-bis(2-carboxyphenylthio)anthraquinone with 4-vinylbenzyl chloride (1:2).
 IT 396715-19-8P 396715-27-8P 396715-30-3P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (blue dye monomer; production of copolymerizable thermally stable anthraquinone dye vinyl derivs.)
 RN 396715-19-8 CAPLUS
 CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis-, bis[(4-ethenylphenyl)methyl] ester (9CI) (CA INDEX NAME)

L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-A

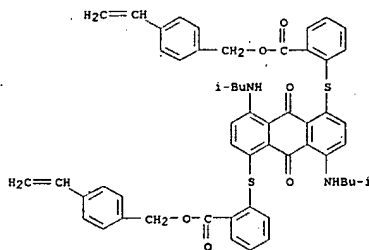


PAGE 1-B

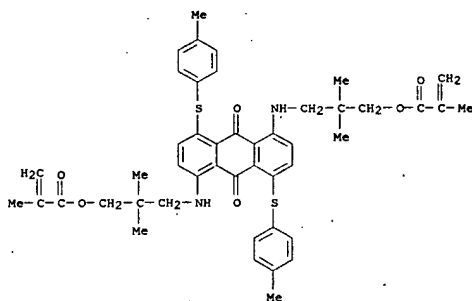
=CH-Me

IT 208656-88-6 396715-38-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (starting material; production of copolymerizable thermally stable anthraquinone dye vinyl derivs.)
 RN 208656-88-6 CAPLUS
 CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis- (9CI) (CA INDEX NAME)

L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

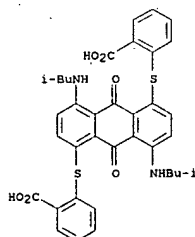


RN 396715-27-8 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

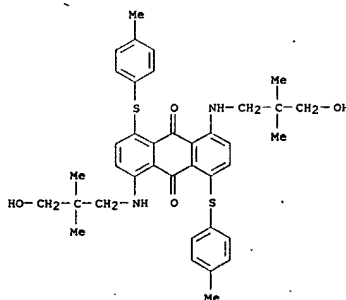


RN 396715-30-3 CAPLUS
 CN 2-Butenoic acid, [9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-1,5-anthracenediyl]bis[imino(2,2-dimethyl-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

L4 ANSWER 17 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 396715-38-1 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:811799 CAPLUS

DOCUMENT NUMBER: 136:87213

TITLE:

The molecular structures and properties of

anthraquinone-type dichroic dyes

Iwanaga, Hiroki; Naito, Katsuyuki; Nakai, Yutaka
Display Materials and Devices Laboratory, Corporate
Research & Development Center, Toshiba Corp.,
Kawasaki, 212-8582, JapanSOURCE: Molecular Crystals and Liquid Crystals Science and
Technology, Section A: Molecular Crystals and Liquid
Crystals (2001), 364, 211-218

CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Relations between the mol. structures and properties of
anthraquinone-typedichroic dyes were studied. Newly developed asym. dyes with phenylthio
groups are highly soluble in fluorinated liquid crystals and the dichroic
ratios of these dyes are high (about 10). However, ortho-position
(phenylthio)-substituted dyes have lower solubilities and dichroic ratios
than other position-substituted dyes. The properties of anthraquinone
dyes with anilino groups are much lower than those of dyes withphenylthio
groups. These results can be strongly related to the flexibility of
substituents. We established a hypothesis concerning dyes in liquid
crystalsolvent. In liquid crystals, the dye has a suitable conformation to
adjustto liquid crystal phase. In this conformation, the solubilities and
dichroic ratios are increased because the interactions between the dye
mols. and liquid crystal mols. are strengthened. Flexible substituentsare
considered to easily form a suitable conformation and realize excellent
properties.

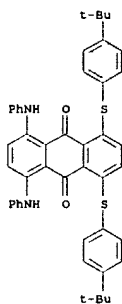
IT 387335-44-6 387335-45-7 387335-46-8

RL: PRP (Properties); TEM (Technical or engineered material use); PRP
(Properties); USES (Uses)(cyan dye; mol. structures and properties of anthraquinone-type
dichroic dyes)

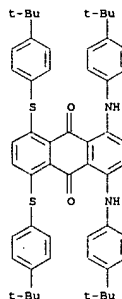
RN 387335-44-6 CAPLUS

CN 9,10-Anthracenedione, 1,4-bis[[4-(1,1-dimethylethyl)phenyl]thio]-5,8-
bis(phenylamino)- (9CI) (CA INDEX NAME)

L4 ANSWER 18 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 387335-45-7 CAPLUS

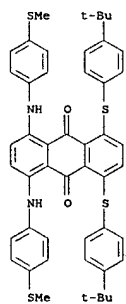
CN 9,10-Anthracenedione, 1,4-bis[[4-(1,1-dimethylethyl)phenyl]amino]-5,8-
bis[[4-(1,1-dimethylethyl)phenyl]thio]- (9CI) (CA INDEX NAME)

RN 387335-46-8 CAPLUS

CN 9,10-Anthracenedione, 1,4-bis[[4-(1,1-dimethylethyl)phenyl]thio]-5,8-
bis[[4-(methylthio)phenyl]amino]- (9CI) (CA INDEX NAME)

L4 ANSWER 18 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

(Continued)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR
THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L4 ANSWER 19 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:323713 CAPLUS

DOCUMENT NUMBER: 135:319510

TITLE:

Synthesis of novel polymeric colorants

AUTHOR(S): Weaver, Max A.; Rhodes, Gerry; Cyr, Michael J.

CORPORATE SOURCE: Eastman Chemical Co., Kingsport, TN, USA

SOURCE: Proceedings of the Annual International Conference &
Exhibition of the American Association of Textile

Chemists and Colorists: The New Millennium of

Textiles, Winston-Salem, NC, United States, Sept.

17-20, 2000 (2000), 160-169. American Association of

Textile Chemists and Colorists: Research Triangle

Park, N. C.

CODEN: 698BST

DOCUMENT TYPE: Conference; (computer optical disk)

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 135:319510

AB Several structural types of polydyes were prepared using three different

synthetic methods and evaluated as colorants for thermoplastics,
particularly polyesters. In Method I, anthraquinone polysulfonamidepolydyes were synthesized by reacting colored anthraquinonedisulfonyl
chlorides with diamines in a polar aprotic solvent in the presence of abase at about 95-100°C. In Method II, bis-aldehydes with two
electron-rich aromatic aldehyde moieties joined by a linking group werereacted with bis(active methylenes) to yield polymethine polydyes.
Polymerization reactions were carried out in aprotic solvents in thepresence of
a base to facilitate Knoevenagel reactions. Lastly, diacidic dyes were
reacted with glycol bis(methanesulfonates) in the presence of a suitablebase and a polar aprotic solvent to give polyester polydyes. The
polydyeswere characterized by gel-permeation chromatog. and UV-visible spectra.
The prepared polydyes were soluble in thermoplastics as opposed topigments,
yet provide advantages over solvent dyes. The polydyes may be preparedin
excellent yields in batch processing equipment and have high color
strength.

IT 208657-18-5P 328925-54-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)

(polydye; preparation of polymeric dyes for application to plastics)

RN 208657-18-5 CAPLUS

CN Benzoic acid,

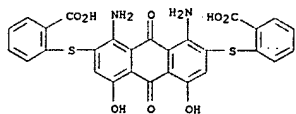
2,2'-[(1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-
anthracenediyl)bis(thio)]bis-, polymer with 1,2-ethanediyl
dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

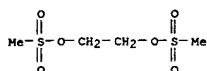
CRN 208657-17-4

CMF C28 H18 N2 O8 S2

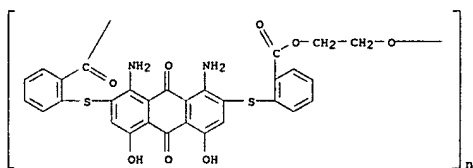
L4 ANSWER 19 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

RN 328925-54-8 CAPLUS
CN Poly[oxy-1,2-ethanediyl]oxycarbonyl-1,2-phenylenethio(1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl)thio-1,2-phenylenecarbonyl (9CI) (CA INDEX NAME)

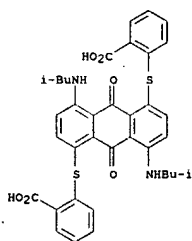


REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

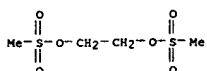
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

328925-49-1P 328925-50-4P 328925-54-8P
328925-73-1P 328925-81-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(oligomeric, optionally cyclic; prepn. of light-absorbing polymeric comps. as thermoplastic dyes)
RN 208656-89-7 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 208656-88-6
CMF C36 H34 N2 O6 S2

CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

RN 208656-96-6 CAPLUS
CN 9,10-Anthracenedione, 1,5-bis[(3-(acetyloxy)-2,2-dimethylpropyl)amino]-4,8-bis[(4-hydroxyphenyl)thio]-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 208656-95-5

10817271.trn

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:161399 CAPLUS
DOCUMENT NUMBER: 134:224013
TITLE: Preparation of light-absorbing polymeric compositions as thermoplastic dyes
INVENTOR(S): Weaver, Max Allen; Krutak, James John, Sr.; Maxwell, Brian Edison; Rhodes, Gerry Foust; Hilbert, Samuel David; Fleischer, Jean Carroll; Parham, William Whitfield
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: U.S., 109 pp., Cont.-in-part of U.S. Ser. No. 976,206, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

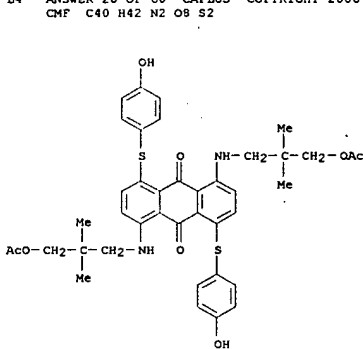
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6197223	B1	20010306	US 1999-320002	19990526
KR 2000057281	A	20000915	KR 1999-704683	19990527
US 2001023938	A1	20010927	US 2000-751766	20001229
US 6776930	B2	20040817		
US 2004195552	A1	20041007	US 2004-817271	20040402
PRIORITY APPLN. INFO.:			US 1996-31478P	P 19961127
			US 1997-976206	B2 19971121
			US 1999-320002	A3 19990526
			US 2000-751766	A1 20001229

AB In the presence of a base, 2,1 diacidic monomer (having functional groups such as -CO2H, -SH, SO2NH2, etc. attached to an aromatic ring) comprising about 1-100 mol% of 2,1 light-absorbing monomer having a light absorption maximum of 300-1200 nm and 0-99 mol% of a non-light absorbing monomer which does not absorb significant light at wavelength >300 or <300 nm, form an oligomeric and optionally cyclic polymer that is useful as a dye for thermoplastics. Thus, thermoplastic Easter PETG 6763 is dry blended, pelletized and pressed with a yellow anthraquinone polymeric composition obtained by the reaction products of 25.60 g of 1,5-bis(2-carboxyphenylthio)anthraquinone and 10.90 g of 1,2-ethanediyl dimethanesulfonate in the presence of 13.82 g of potassium carbonate in 400 mL of N-methyl-2-pyrrolidone, to give rise to a transparent yellow film with excellent color development.

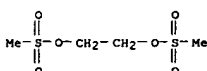
IT 208656-89-7P 208656-96-6P 208656-99-9P
208657-03-8P 208657-18-5P 208657-26-5P,

1,5-Bis(2-carboxyphenylthio)anthraquinone-1,5-Bis(2-carboxyphenylthio)-4,8-bis(isobutylamino)anthraquinone-1,2-ethanediyl dimethanesulfonate copolymer 208657-38-9P 208657-41-4P
208657-42-5P, 1,4-Bis(2-carboxyphenylthio)anthraquinone-1,5-Bis(2-carboxyphenylthio)-4,8-bis(isobutylamino)anthraquinone-1,2-ethanediyl dimethanesulfonate copolymer 328925-44-6P 328925-47-9P

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

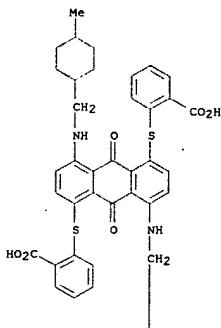
RN 208656-99-9 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(3-(acetyloxy)-2,2-dimethylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)]bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

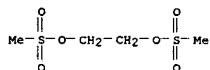
CRN 208656-98-8
CMF C44 H46 N2 O6 S2

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

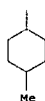
PAGE 1-A



CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

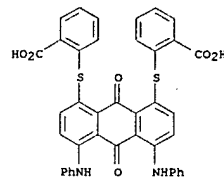
PAGE 2-A



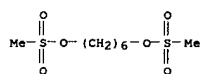
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 208657-03-9 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,5-bis(phenylamino)-9,10-dioxo-1,8-anthracenediyl]bis(thio))bis-, polymer with 1,6-hexanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 208657-02-7
CMF C40 H26 N2 O6 S2

CM 2

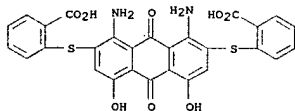
CRN 4239-24-1
CMF C8 H18 O6 S2

RN 208657-18-5 CAPLUS
CN Benzoic acid, 2,2'-[([1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl]bis(thio))bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

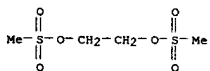
CM 1

CRN 208657-17-4
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L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

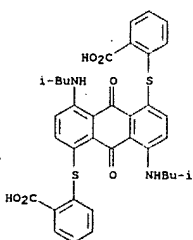


CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

RN 208657-26-5 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio))bis-, polymer with 2,2'-[([9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]bis(thio))bis(benzoic acid) and 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

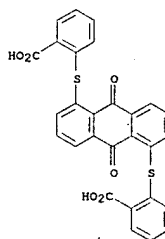
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CRN 208656-88-6
CMF C36 H34 N2 O6 S2

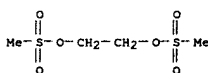
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10817271.trn

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

CRN 76404-13-2
CMF C28 H16 O6 S2

CM 3

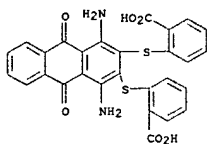
CRN 4672-49-5
CMF C4 H10 O6 S2

RN 208657-38-9 CAPLUS
CN Benzoic acid, 2,2'-[([1,4-diamino-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]bis(thio))bis-, polymer with 1,6-hexanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

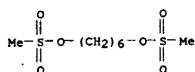
CM 1

CRN 208657-37-8
CMF C28 H18 N2 O6 S2

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

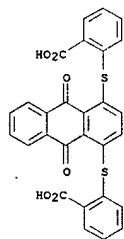
CRN 4239-24-1
CMF C8 H18 O6 S2

RN 208657-41-4 CAPLUS
CN Benzoic acid, 2,2'-[5,8-[(2,6-diethylphenyl)amino]-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]bis(thio)bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

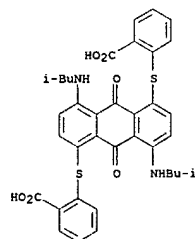
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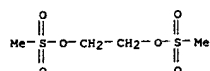
L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

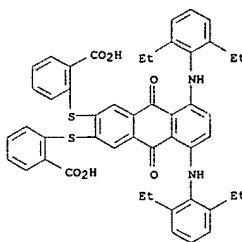
CRN 208656-88-6
CMF C36 H34 N2 O6 S2

CM 3

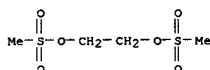
CRN 4672-49-5
CMF C4 H10 O6 S2

10817271.trn

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

CRN 4672-49-5
CMF C4 H10 O6 S2

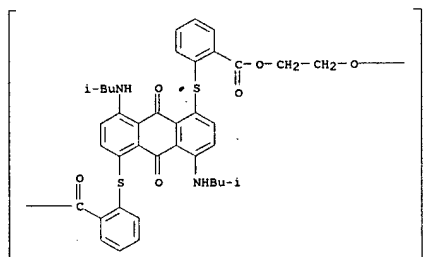
RN 208657-42-5 CAPLUS
CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis-, polymer with 2,2'-[9,10-dihydro-9,10-dioxo-1,4-anthracenediyl]bis(thio)bis[benzoic acid] and 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 208657-22-1
CMF C28 H16 O6 S2

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 328925-44-6 CAPLUS
CN Poly[oxy-1,2-ethanediylloxycarbonyl-1,2-phenylenethio[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]thio-1,2-phenylenecarbonyl] (9CI) (CA INDEX NAME)



RN 328925-47-9 CAPLUS
CN Poly[oxy-1,2-ethanediylloxycarbonyl-1,2-phenylenethio[4,8-bis[(3-(acetyloxy)-2,2-dimethylpropyl)amino]-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]thio-1,4-phenylene] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

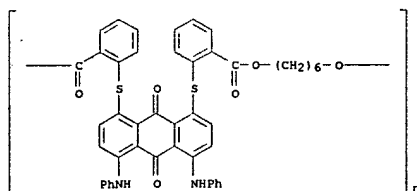
RN 328925-49-1 CAPLUS
CN Poly[oxy-1,2-ethanediylloxycarbonyl-1,2-phenylenethio[9,10-dihydro-4,8-bis[(4-methylcyclohexyl)methyl]amino]-9,10-dioxo-1,5-anthracenediyl]thio-1,2-phenylenecarbonyl] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

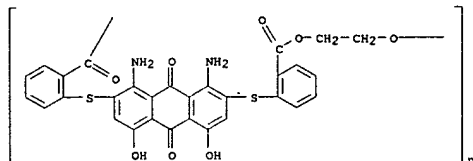
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

RN 328925-50-4 CAPLUS
CN Poly[oxy-1,6-hexanediylloxycarbonyl-1,2-phenylenethio[9,10-dihydro-9,10-dioxo-4,5-bis(phenylamino)-1,8-anthracenediyl]thio-1,2-phenylenecarbonyl] (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

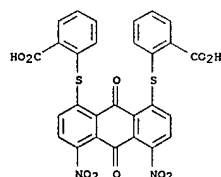


RN 328923-54-8 CAPLUS
 CN Poly(oxy-1,2-ethanediyl)oxycarbonyl-1,2-phenylenethio(1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl)thio-1,2-phenylenecarbonyl (9CI) (CA INDEX NAME)



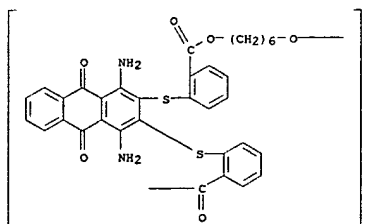
RN 328925-73-1 CAPLUS
 CN Poly(oxy-1,6-hexanediyl)oxycarbonyl-1,2-phenylenethio(1,4-diamino-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl)thio-1,2-phenylenecarbonyl (9CI) (CA INDEX NAME)

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

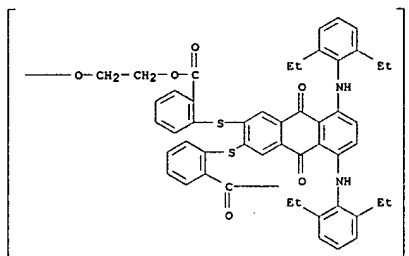


REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 20 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 328925-81-1 CAPLUS
 CN Poly(oxy-1,2-ethanediyl)oxycarbonyl-1,2-phenylenethio[5,8-bis[(2,6-diethylphenyl)amino]-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]thio-1,2-phenylenecarbonyl (9CI) (CA INDEX NAME)



IT 208657-04-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of light-absorbing polymeric comps. as thermoplastic dyes)
 RN 208657-04-9 CAPLUS
 CN Benzoic acid, 2,2'-[(9,10-dihydro-4,5-dinitro-9,10-dioxo-1,8-anthracenediyl)bis(thio)]bis- (9CI) (CA INDEX NAME)

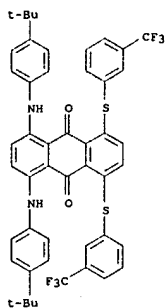
L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:241953 CAPLUS
 DOCUMENT NUMBER: 130:304105
 TITLE: Dichroic dye for liquid-crystal display device
 INVENTOR(S): Iwanaga, Hironori; Naito, Katsuyuki
 PATENT ASSIGNEE(S): Toshiba Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

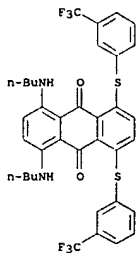
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11100580	A2	19990413	JP 1998-66682	19980317
JP 3813729	B2	20060823		
US 6033742	A	20000307	US 1998-49950	19980330
JP 2005002348	A2	20050106	JP 2004-212156	20040720
			JP 1997-81707	A 19970331
			JP 1997-220210	A 19970731
			JP 1998-66682	A3 19980317

OTHER SOURCE(S): MARPAT 130:304105
 AB A liquid-crystal display device comprises a liquid crystal layer containing an anthraquinone-type dichroic dye having a $\Delta H_{tr,m}/268$ value of ≤ 0.08 kJ/Kg wherein $\Delta H_{tr,m}$ is the sum of the transition and melting enthalpies (per unit weight) of the dye from -5° to m.p. and $\Delta S_{tr,m}$ is the sum of the transition and melting entropies (per unit weight) of the dye from -5° to m.p.
 IT 223445-16-7 223445-17-8 223445-19-0
 223445-25-8 223445-31-6
 RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (electrooptical display devices with liquid crystal layers containing)
 RN 223445-16-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis[[4-(1,1-dimethylethyl)phenyl]amino]-5,8-bis[[3-(trifluoromethyl)phenyl]thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

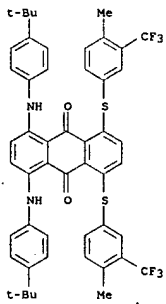


RN 223445-17-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis((4-(tert-butyl)phenyl)thio)-5,8-bis((3-(trifluoromethyl)phenyl)thio)- (9CI) (CA INDEX NAME)

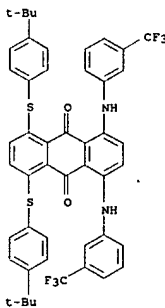


RN 223445-19-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis((4-(1,1-dimethylethyl)phenyl)thio)-5,8-bis((3-(trifluoromethyl)phenyl)amino)- (9CI) (CA INDEX NAME)

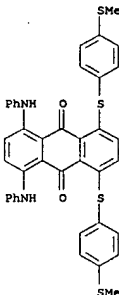
L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 21 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 223445-25-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis((4-(tert-butyl)phenyl)thio)-5,8-bis((4-(trifluoromethyl)phenyl)thio)- (9CI) (CA INDEX NAME)



RN 223445-31-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-bis((4-(1,1-dimethylethyl)phenyl)thio)-5,8-bis((4-(1,1-dimethylethyl)phenyl)thio)- (9CI) (CA INDEX NAME)

L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:489200 CAPLUS

DOCUMENT NUMBER: 129:123783

TITLE: Relation between molecular structures of dichroic dyes

AUTHOR(S): Naito, Katsuyuki; Iwanaga, Hiroki
 CORPORATE SOURCE: Advanced Research Laboratory, Toshiba Corporation, Toshiba-cho, Saiwai-ku, Kawasaki, 210-8582, Japan
 SOURCE: Japanese Journal of Applied Physics, Part 1: Regular Papers, Short Notes & Review Papers (1998), 37(6A), 3422-3427

PUBLISHER: JAPNDE: ISSN: 0021-4922
 JAPANESE JOURNAL OF APPLIED PHYSICS

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A mol. design rule for dichroic dyes with a high solubility in fluorinated liquid crystals has been investigated for 13 dyes. Mol. interactions and a concept of motional segments proportional to mol. weight were introduced to explain the deviation from an ideal solution. A semi-empirical equation was

obtained: $\log C = -20.75(\Sigma \Delta H_f/T - \Sigma \Delta S_f) - 0.013(E_h - E_p) + 2.32$, where C represents a saturated solubility in wt% at T (K). $\Sigma \Delta H_f$ (kJ kg⁻¹) represents the sum of the enthalpies of fusion and of phase-transitions from T to m.p. $\Sigma \Delta S_f$ represents the sum of the entropies. Calculated E_h represents a hydration energy. E_p is the hydrophobic energy determined from calculated 1-octanol log P. Log C is mainly

determined by the interaction between dye mols. Bulky, rigid and asym. structures give a high solubility. Large electrostatic interaction between a

dye mol. and liquid crystal mols. increases solubility

IT 209917-51-1

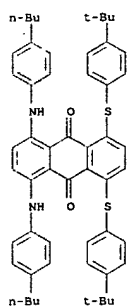
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(dye; relation between mol. structures of dichroic dyes and their solubilities in fluorinated liquid crystals)

RN 209917-51-1 CAPLUS

CN 9,10-Anthracenedione, 1,4-bis((4-butylphenyl)amino)-5,8-bis((4-(1,1-dimethylethyl)phenyl)thio)- (9CI) (CA INDEX NAME)

L4 ANSWER 22 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

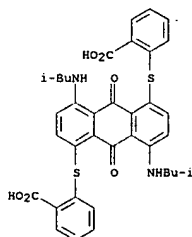
ACCESSION NUMBER: 1998:388572 CAPLUS
DOCUMENT NUMBER: 129:55411
TITLE: Preparation of light-absorbing polymeric compositions and use thereof for coloring thermoplastics
INVENTOR(S): Weaver, Max Allen; Krutak, James John, Sr.; Maxwell, Brian Edison; Rhodes, Gerry Foust; Hilbert, Samuel David; Fleischer, Jean Carroll; Parham, William Whitfield
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 247 pp.
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9823690	A1	19980604	WO 1997-US22255	19971125
W: BR, CN, JP, KR				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 948570	A1	19991013	EP 1997-949760	19971125
R: CH, DE, FR, GB, LI				
BR 9713145	A	20000208	BR 1997-13145	19971125
CN 1245516	A	20000223	CN 1997-181559	19971125
JP 2002516621	T2	20020604	JP 1998-524922	19971125
KR 2000057281	A	20000915	KR 1999-704683	19990527
PRIORITY APPLN. INFO.:			US 1996-31478P	P 19961127
			US 1997-976206	A 19971121
			WO 1997-US22255	W 19971125

AB Title compns. are prepared by reacting in a solvent in the presence of a base (a) at least one diacidic monomer comprising approx. 1-100 mol% of at least one light-absorbing monomer having a light absorption maximum at approx. 300-1200 nm and 99-0 mol% of a non-light absorbing monomer which does not absorb significant light at wavelengths above 300 nm or has a light absorption maximum below 300 nm, with (b) an organic compound X-B-X1, where B is a divalent organic radical to form a light-absorbing polymeric composition
-(AB)n-, where B is as defined above; n ≥ 2; and A is the residue of the light-absorbing diacidic monomer above and the remaining portion of A is the residue of the non-light absorbing monomer. The process allows preparation of near UV, visible, and near IR light-absorbing polymeric compns.
at relatively low temps. without prolonged heating. Thus, 1,5-bis(2-carboxyphenylthio)anthraquinone 0.05, 1,2-ethanediol dimethanesulfonate 0.05, and potassium carbonate 0.10 mol in N-methyl-2-pyrrolidinone was reacted 1.0 h at 125° to give a yellow polymeric product (I) having Mw 6083 and polydispersity 2.03. A blend of 400 g Estar PETG 6763 [poly(ethylene-1,4-cyclohexanedimethylene) terephthalate] pellets and 0.12 g I was extruded, pelletized, and pressed

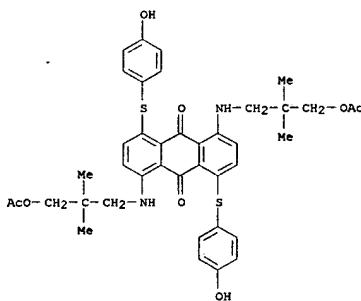
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
to form a 18-20 mil transparent yellow film having excellent color development.
IT 208656-88-6P 208656-95-5P 208656-98-8P
208657-02-7P 208657-17-4P 208657-37-8P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT (Reactant or reagent)
(preparation and polymerization of; preparation of light-absorbing polymeric compns. for coloring thermoplastics)
RN 208656-88-6 CAPLUS
CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis- (9CI) (CA INDEX NAME)



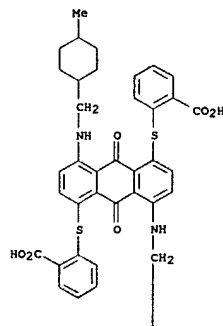
RN 208656-95-5 CAPLUS
CN 9,10-Anthracenedione, 1,5-bis[[3-(acetyloxy)-2,2-dimethylpropyl]amino]-4,8-bis[(4-hydroxyphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 208656-98-8 CAPLUS
CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[[4-(methylcyclohexyl)methyl]amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis- (9CI) (CA INDEX NAME)

PAGE 1-A

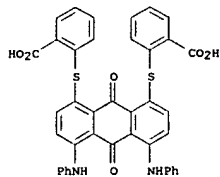


L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

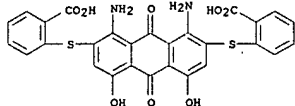
PAGE 2-A



RN 208657-02-7 CAPLUS
 CN Benzoic acid, 2,2'-[([9,10-dihydro-4,5-bis(phenylamino)-9,10-dioxo-1,8-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)

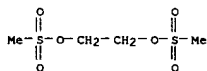


RN 208657-17-4 CAPLUS
 CN Benzoic acid, 2,2'-[([1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)



RN 208657-37-8 CAPLUS
 CN Benzoic acid, 2,2'-[([1,4-diamino-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)

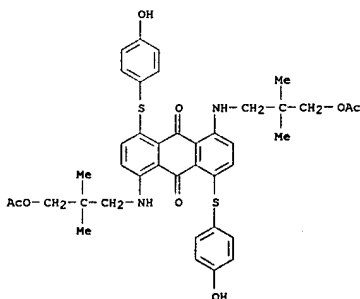
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 208656-96-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis([3-(acetyloxy)-2,2-dimethylpropylamino]-4,8-bis([4-hydroxyphenyl]thio)-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

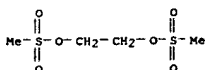
CN 1

CRN 208656-95-5
 CMF C40 H42 N2 O8 S2



CM 2

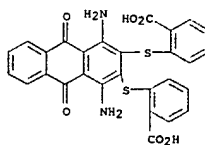
CRN 4672-49-5
 CMF C4 H10 O6 S2



RN 208656-99-9 CAPLUS

10817271.trn

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

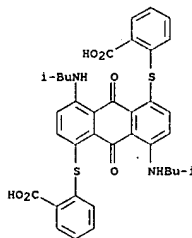


IT 208656-89-7P 208656-96-6P 208656-99-9P
 208657-03-8P 208657-18-5P 208657-26-5P
 208657-38-9P 208657-41-4P 208657-42-5P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of light-absorbing polymeric compns. for coloring thermoplastics)

RN 208656-89-7 CAPLUS
 CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis([2-methylpropylamino]-9,10-dioxo-1,5-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)

CN 1

CRN 208656-88-6
 CMF C36 H34 N2 O6 S2



CM 2

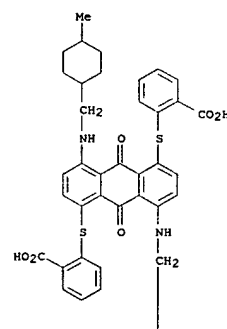
CRN 4672-49-5
 CMF C4 H10 O6 S2

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis([4-methylcyclohexyl)methyl]amino)-9,10-dioxo-1,5-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)

CN 1

CRN 208656-98-8
 CMF C44 H46 N2 O6 S2



PAGE 1-A

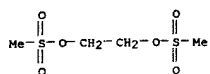
PAGE 2-A



CM 2

CRN 4672-49-5
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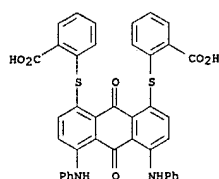
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 208657-03-8 CAPLUS
 CN Benzoic acid, 2,2'-[9,10-dihydro-4,5-bis(phenylamino)-9,10-dioxo-1,8-anthracenediyl]bis(thio)bis-, polymer with 1,6-hexanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

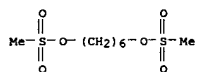
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CRN 208657-02-7
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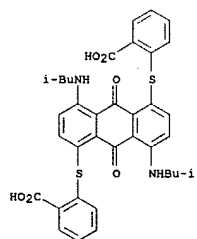
CRN 4239-24-1
 CMF C8 H18 O6 S2



RN 208657-18-5 CAPLUS
 CN Benzoic acid, 2,2'-[(1,8-diamino-9,10-dihydro-4,5-dihydroxy-9,10-dioxo-2,7-anthracenediyl)bis(thio)]bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

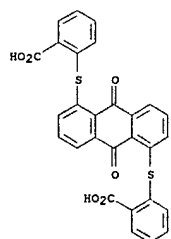
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L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



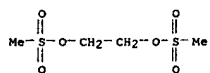
CM 2

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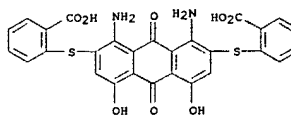


CM 3

CRN 4672-49-5
 CMF C4 H10 O6 S2

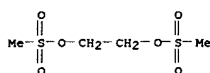


10817271.trn

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CRN 208657-17-4
 CMF C28 H18 N2 O8 S2

CM 2

CRN 4672-49-5
 CMF C4 H10 O6 S2



RN 208657-26-5 CAPLUS
 CN Benzoic acid, 2,2'-[9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio)bis-, polymer with 2,2'-[(9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio)]bis(benzoic acid) and 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

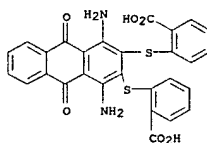
CRN 208656-88-6
 CMF C36 H34 N2 O6 S2

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 208657-38-9 CAPLUS
 CN Benzoic acid, 2,2'-[(1,4-diamino-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl)bis(thio)]bis-, polymer with 1,6-hexanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

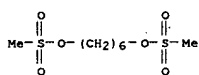
CM 1

CRN 208657-37-8
 CMF C28 H18 N2 O6 S2



CM 2

CRN 4239-24-1
 CMF C8 H18 O6 S2

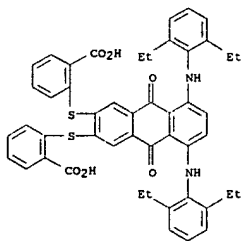


RN 208657-41-4 CAPLUS
 CN Benzoic acid, 2,2'-[(5,8-[(2,6-diethylphenyl)amino]-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl)bis(thio)]bis-, polymer with 1,2-ethanediyl dimethanesulfonate (9CI) (CA INDEX NAME)

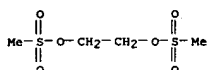
CM 1

CRN 204649-53-6
 CMF C48 H42 N2 O6 S2

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

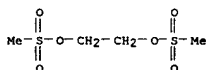
CRN 4672-49-5
CMF C4 H10 O6 S2

RN 208657-42-5 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,8-bis[(2-methylpropyl)amino]-9,10-dioxo-1,5-anthracenediyl]bis(thio))bis-, polymer with
2,2'-[([9,10-dihydro-9,10-dioxo-1,4-anthracenediyl]bis(thio))bis(benzoic acid) and
1,2-ethanedithiol dimethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 208657-22-1
CMF C28 H16 O6 S2

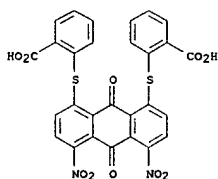
L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



IT 208657-04-9

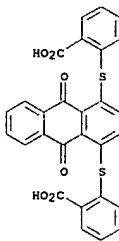
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with aniline; preparation of light-absorbing polymeric
compns. for coloring thermoplastics)

RN 208657-04-9 CAPLUS
CN Benzoic acid, 2,2'-[([9,10-dihydro-4,5-dinitro-9,10-dioxo-1,8-anthracenediyl]bis(thio))bis- (9CI) (CA INDEX NAME)

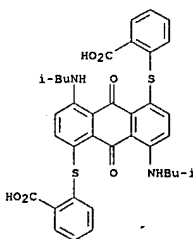


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 23 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



CM 2

CRN 208656-88-6
CMF C36 H34 N2 O6 S2

CM 3

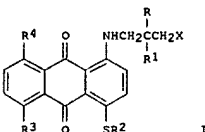
CRN 4672-49-5
CMF C4 H10 O6 S2

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:388571 CAPLUS
DOCUMENT NUMBER: 129:55410
TITLE: Polymerizable 1,5(8)-bis(substituted propylamino)-4,8(5)-bis(arylthio)anthraquinones
INVENTOR(S): Weaver, Max Allen; Krutak, James John, Sr.; Coates, Clarence Alvin, Jr.
PATENT ASSIGNEE(S): Eastman Chemical Company, USA
SOURCE: PCT Int. Appl., 22 pp.
DOCUMENT TYPE: CODEN: PIXXD2
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: English
PATENT INFORMATION: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9823689	A1	19980604	WO 1997-US22236	19971125
W: BR, CN, JP, KR, MX				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5955564	A	19990921	US 1997-975738	19971121
CN 1238796	A	19991215	CN 1997-180015	19971125
BR 9713443	A	20000328	BR 1997-13443	19971125
EP 1023400	A1	20000802	EP 1997-949756	19971125
EP 1023400	B1	20020227		
R: CH, DE, FR, GB, IT, LI				
JP 2002514243	T2	20020514	JP 1998-524920	19971125
KR 2000057216	A	20000915	KR 1999-704555	19990524
PRIORITY APPLN. INFO.:			US 1996-32361P	P 19961127
			US 1997-975738	A 19971121
			WO 1997-US22236	W 19971125

OTHER SOURCE(S): MARPAT 129:55410
GI



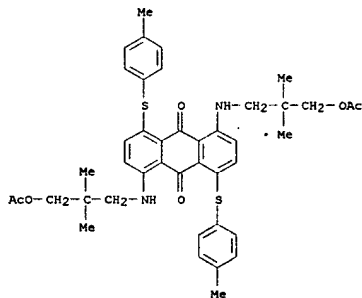
AB The blue anthraquinone colorants have the structure I (R, R1 = H, (un)substituted C1-6 alkyl, C3-7 cycloalkyl, 2-furyl, 2-thienyl, Ph; R2 = aryl; R3, R4 = NHCH2CRR1CH2X, SR2: R3 = R4: X = OH, C1-6 acyloxy, CO2H, C1-6 carbalkoxy, carbamoyloxy). The I are useful for copolymerizing into polymers such as polyesters and polyurethanes. In particular, they are advantageous for preparing colored sulfopolyesters which are useful for

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
coloring human hair. Thus, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]anthraquinone was acetylated, brominated, and condensed with p-MeC₆H₄SH to give a I, which was copolymerized with diethylene glycol, di-Me isophthalate, and di-Me 5-(sodiumsulfo)isophthalate to give a blue polyester with Mw 20,085, from which a 30% aq. dispersion was prepd. and used as a hair dye.

IT 208522-51-4P, 1,5-Bis[(3-acetoxy-2,2-dimethylpropyl)amino]-4,8-bis[(p-tolylthio)anthraquinone 208522-57-0P, 1,5-Bis[(3-acetoxypropyl)amino]-4,8-bis[(p-tolylthio)anthraquinone 208522-59-2P, 1,5-Bis[(3-hydroxypropyl)amino]-4,8-bis[(p-tolylthio)anthraquinone

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)
(polymerizable bis(substituted propylamino)bis(arylthio)anthraquinones for manufacture of polymeric hair dyes)

RN 208522-51-4 CAPLUS
CN 9,10-Anthracenedione, 1,5-bis[(3-(acetyloxy)-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



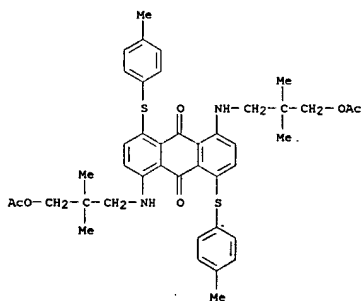
RN 208522-57-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-bis[(3-(acetyloxy)propyl)amino]-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
(polymerizable bis(substituted propylamino)bis(arylthio)anthraquinones for manuf. of polymeric hair dyes)

RN 208522-60-5 CAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with 1,5-bis[(3-(acetyloxy)-2,2-dimethylpropyl)amino]-4,8-bis[(4-methylphenyl)thio]-9,10-anthracenedione, dimethyl 1,3-benzenedicarboxylate and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

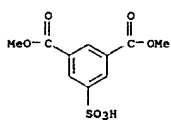
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CRN 208522-51-4
CMF C42 H46 N2 O6 S2



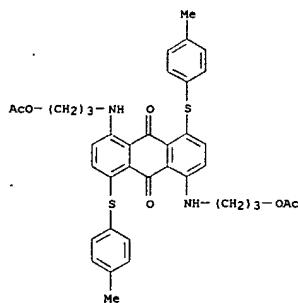
CM 2

CRN 3965-55-7
CMF C10 H10 O7 S . Na

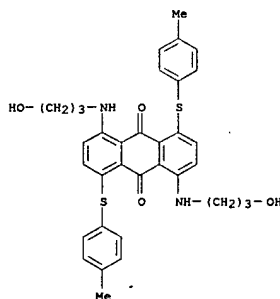


• Na

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 208522-59-2 CAPLUS
CN 9,10-Anthracenedione, 1,5-bis[(3-hydroxypropyl)amino]-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

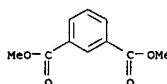


IT 208522-60-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

L4 ANSWER 24 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

CM 3

CRN 1459-93-4
CMF C10 H10 O4



CM 4

CRN 111-46-6
CMF C4 H10 O3

HO-CH₂-CH₂-O-CH₂-CH₂-OH

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:219853 CAPLUS
 DOCUMENT NUMBER: 128:230872
 TITLE: Polyesters containing copolymerized substituted 1,4-bis(2,6-dialkylanilino)-9,10-anthraquinones as colorants
 INVENTOR(S): Weaver, Max Allen; Maxwell, Bryan Edison; Rhodes, Gerry Foust; Krutak, James John, Sr.
 PATENT ASSIGNEE(S): Eastman Chemical Co., USA
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

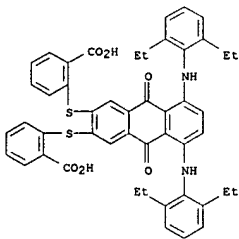
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9814502	A1	19980409	WO 1997-US17100	19970930
W: CA, CN, JP RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
US 5962557	A	19991005	US 1997-906643	19970807
EP 929595	A1	19990721	EP 1997-944412	19970930
EP 929595	B1	20001115		
R: DE, FR, GB CN 1231680 JP 2001504143				
PRIORITY APPLN. INFO.:				
			US 1997-906643	A 19970807
			WO 1997-US17100	W 19970930

AB A colored polyester copolymer comprises the reaction product of at least one linear thermoplastic polyester precursor and at least ten ppm by weight of a residue of at least one 1,4-bis(2,6-dialkylanilino)-9,10-anthraquinone colorant which has a polyester reactive group. A composition may be formed comprising the copolymer in admixt. with at least one thermoplastic polymer. A colorant-containing polyester was prepared by polymerization of bis(2-hydroxyethyl) terephthalate and 1,4-bis(2,6-diethylthio)-9,10-anthraquinone.

IT 204649-57-OP
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyesters containing copolymerized substituted 1,4-bis(2,6-dialkylanilino)-9,10-anthraquinones as colorants)

RN 204649-57-0 CAPLUS
 CN 1,4-Benzenedicarboxylic acid, bis(2-hydroxyethyl) ester, polymer with 2,2'-[5,8-bis[(2,6-diethylphenyl)amino]-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]bis(thio)bis(benzoic acid) (9CI) (CA INDEX NAME)

L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

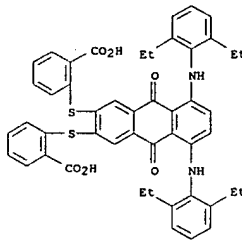


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

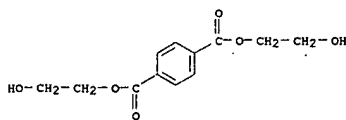
FORMAT

L4 ANSWER 25 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

CM 1
 CRN 204649-53-6
 CMF C48 H42 N2 O6 S2



CM 2
 CRN 959-26-2
 CMF C12 H14 O6



IT 204649-53-6P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
 RACT (Reactant or reagent)
 (polyesters containing copolymerized substituted 1,4-bis(2,6-dialkylanilino)-9,10-anthraquinones as colorants)

RN 204649-53-6 CAPLUS
 CN Benzoic acid, 2,2'-[5,8-bis[(2,6-diethylphenyl)amino]-9,10-dihydro-9,10-dioxo-2,3-anthracenediyl]bis(thio)bis- (9CI) (CA INDEX NAME)

L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

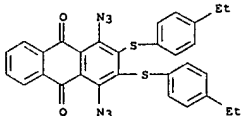
ACCESSION NUMBER: 1997:265846 CAPLUS
 DOCUMENT NUMBER: 126:277439
 TITLE: Heterocyclization of 1,4-diazido-2,3-bis(arylthio)-9,10-anthraquinones
 AUTHOR(S): Gornostaev, L. M.; Lavrikova, T. I.; Arnol'd, E. V.
 CORPORATE SOURCE: Krasnoyarsk. Gos. Pedagog. Univ., Krasnoyarsk, 660049, Russia
 SOURCE: Zhurnal Organicheskoi Khimii (1996), 32(9), 1390-1393
 CODEN: ZORKAE; ISSN: 0514-7492
 PUBLISHER: Nauka
 DOCUMENT TYPE: Journal
 LANGUAGE: Russian
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

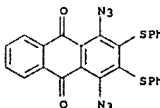
AB Thermal cyclization of title compds. such as I occurred in two steps, the first yielding a fused phenothiazine, e.g., II, and the second yielding a fused isoxazole, e.g., III.

IT 152027-87-7P 188934-83-OP 188934-84-1P
 188934-85-2P 188934-86-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and thermal cyclization of)

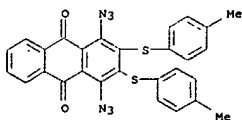
RN 152027-87-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis[(4-ethylphenyl)thio]- (9CI) (CA INDEX NAME)



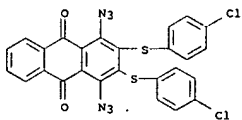
RN 188934-83-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis(phenylthio)- (9CI) (CA INDEX NAME)



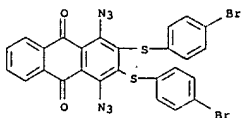
L4 ANSWER 26 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 188934-84-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis[(4-methylphenyl)thio]- (9CI)
 (CA INDEX NAME)



RN 188934-85-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis[(4-chlorophenyl)thio]- (9CI)
 (CA INDEX NAME)



RN 188934-86-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis[(4-bromophenyl)thio]- (9CI)
 (CA INDEX NAME)



L4 ANSWER 27 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

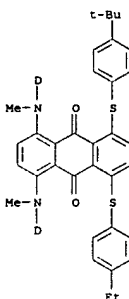
L4 ANSWER 27 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1997:51185 CAPLUS
 DOCUMENT NUMBER: 126:82324
 TITLE: Liquid crystal composition and liquid crystal display using the same
 INVENTOR(S): Naito, Katsuyuki
 PATENT ASSIGNEE(S): Tokyo Shibaura Electric Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245963	A2	19960924	JP 1995-51505	19950310

PRIORITY APPLN. INFO.: JP 1995-51505 19950310

AB The title guest-host type liquid crystal composition contains a deuterated dichroic dye. The dichroic dye may be an anthraquinone derivative containing deuterated OH, amino, amido, urethane, urea, carboxyl and/or thiol. The display shows improved high contrast.

IT 184237-61-4
 RL: MGA (Modifier or additive use); USES (Uses)
 (deuterated dichroic dye additive to liquid crystal composition)
 RN 184237-61-4 CAPLUS
 CN 9,10-Anthracenedione, 1-[[4-(1,1-dimethylethyl)phenyl]thio]-4-[[4-ethylphenyl]thio]-5,8-bis(methylamino)-d- (9CI) (CA INDEX NAME)



L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1996:546612 CAPLUS
 DOCUMENT NUMBER: 125:288871
 TITLE: Thermal transfer sheet using combined dyes
 INVENTOR(S): Aso, Kenichi; Sato, Hideaki; Eguchi, Hiroshi; Kafuku, Komei; Takiguchi, Ryohei
 PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
 SOURCE: U.S., 47 pp., Cont.-in-part of U.S. 5,369,078.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

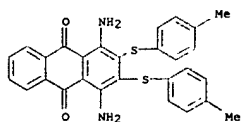
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5550098	A	19960827	US 1994-220105	19940330
JP 05131765	A2	19930528	JP 1991-325060	19911114
JP 06008641	A2	19940118	JP 1992-190257	19920625
JP 06099676	A2	19940412	JP 1992-276811	19920922
JP 05238170	A2	19930917	JP 1992-324699	19921111
JP 3347779	B2	20021120		
JP 2002096565	A2	20020402	JP 2001-222325	19921111
US 5369078	A	19941129	US 1992-974723	19921113
JP 05262056	A2	19931012	JP 1993-24538	19930121
JP 3288783	B2	20020604		
JP 05262062	A2	19931012	JP 1993-24940	19930121
JP 3271023	B2	20020402		
JP 06286345	A2	19941011	JP 1993-95052	19930331
			JP 1991-325058	A 19911114
			JP 1991-325060	A 19911114
			JP 1992-29042	A 19920121
			JP 1992-29043	A 19920121
			JP 1992-190257	A 19920625
			JP 1992-276811	A 19920922
			US 1992-974723	A2 19921113
			JP 1993-95052	A 19930331
			JP 1992-324699	A3 19921111

PRIORITY APPLN. INFO.: JP 1991-325058 A 19911114

AB An object of the present invention is to provide a thermal transfer sheet wherein a clear image having a sufficient d. is formed in a thermal transfer process using a sublimable dye and wherein the formed image exhibits excellent fastness, particularly excellent light fastness. The present invention is directed to a thermal transfer sheet comprising a base sheet and a dye-containing layer formed on the one surface of the base sheet wherein a dye included in the dye-containing layer comprises a mixture of two or more specific dyes.

IT 154341-16-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (combined with other dye for thermal transfer sheet)

L4 ANSWER 28 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 154341-16-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-methylphenyl)thio]- (9CI)
 (CA INDEX NAME)

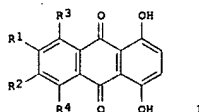


L4 ANSWER 29 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:742921 CAPLUS
 DOCUMENT NUMBER: 123:289600
 TITLE: Quinizarins, their production and use
 INVENTOR(S): Masuda, Kiyoshi; Kaieda, Osamu; Tamaura, Yukie
 PATENT ASSIGNEE(S): Nippon Shokubai Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 54 pp.
 CODEN: EPXXDW

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

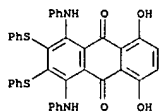
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 661350	A1	19950705	EP 1994-307231	19941003
EP 661350	B1	20010822		
R: CH, DE, GB, LI				
JP 07195831	A2	19950801	JP 1993-335959	19931228
JP 06279694	A2	19941004	JP 1994-7686	19940127
JP 3238265	B2	20011210		
JP 06278376	A2	19941004	JP 1994-8647	19940128
JP 3229103	B2	20011112		
PRIORITY APPLN. INFO.:				
			JP 1993-335959	A 19931228
			JP 1994-7686	A 19940127
			JP 1994-8647	A 19940128
			JP 1993-13726	A 19930129
			JP 1993-14834	A 19930201

OTHER SOURCE(S): MARPAT 123:289600
 GI



AB The quinizarins I (R1 = secondary amino group, alkylthio, (un)substituted PhS; R2-R4 = H, halogen, amino, OH, alkoxy, (un)substituted phenoxy, alkylthio, (un)substituted PhS) are dyes useful in electrophotog. color toners, thermal-transfer recording sheets, optical recording media, jet-printing inks, and color filters. Thus, I (R1-R4 = F), PhNH2, and KF were heated in refluxing MeCN for 24 h to give a mixed product from which I (R1 = PhNH, R2-R4 = F), λ_{\max} 533 nm, and I (R1 = R2 = PhNH, R3 = R4 = F), λ_{\max} 648 nm, were separated by chromatog. in 33.2% and 9.3%

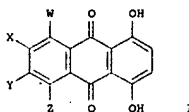
L4 ANSWER 29 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 yield, resp.
 IT 161457-05-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation and use of quinizarin dyes)
 RN 161457-05-2 CAPLUS
 CN 9,10-Anthracenedione, 5,8-dihydroxy-1,4-bis(phenylamino)-2,3-bis(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:408471 CAPLUS
 DOCUMENT NUMBER: 122:293411
 TITLE: Lightfast quinizarin compounds soluble in organic solvents, manufacture thereof, and visible light absorbers containing the same
 INVENTOR(S): Kaieda, Osamu; Masuda, Seiji; Tamaura, Norie
 PATENT ASSIGNEE(S): Nippon Catalytic Chem Ind, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

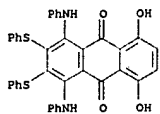
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06279694	A2	19941004	JP 1994-7686	19940127
JP 3238265	B2	20011210		
US 5608091	A	19970304	US 1994-316244	19940930
EP 661350	A1	19950705	EP 1994-307231	19941003
EP 661350	B1	20010822		
R: CH, DE, GB, LI				
PRIORITY APPLN. INFO.:				
			JP 1993-14834	A 19930201
			JP 1993-335959	A 19931228
			JP 1994-7686	A 19940127
			JP 1994-8647	A 19940128

OTHER SOURCE(S): MARPAT 122:293411
 GI



AB The title compds. having absorption wavelength 480-700 nm have the general formula I [W, X, Y, Z = halogen (excluding W = X = Y = Z = halogen), (un)substituted anilino, phenoxy, phenylthio, NHRI, OR2, SR3; R1-3 = H, Cl-12 alkyl]. 5,6,7,8-Tetrafluoroquinizarin was treated with aniline in MeCN in the presence of KF to give 6-anilino-5,6,8-trifluoroquinizarin and 6,7-dianilino-5,8-difluoroquinizarin.
 IT 161457-05-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (lightfast quinizarin compds. soluble in organic solvents for visible light absorbers)

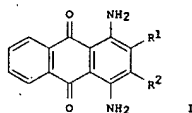
L4 ANSWER 30 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 161457-05-2 CAPLUS
 CN 9,10-Anthracenedione, 5,8-dihydroxy-1,4-bis(phenylamino)-2,3-bis(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 31 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1994:591293 CAPLUS
 DOCUMENT NUMBER: 121:191293
 TITLE: Postcoloring type anthraquinone red dye and electrophotographic developer color toner
 INVENTOR(S): Koshida, Hitoshi; Aida, Isamu; Tanaka, Hironori; Matsuzaki, Yoriaki; Takuma, Hirosuke
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JXXXXF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06059511	A2	19940304	JP 1992-212619	19920810
PRIORITY APPLN. INFO.:			JP 1992-212619	19920810

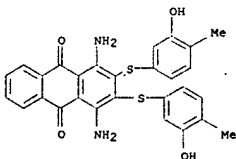
OTHER SOURCE(S): MARPAT 121:191293
 GI



AB The dye comprises an anthraquinone dye I [R1, R2 = H, halo, (substituted) phenylthio, phenoxyl]. The toner contains the dye. The toner gives fog-prevented and light-resistant red image.

IT 157689-28-6
 RL: USES (Uses)
 (electrophotog. developer red toner containing)
 RN 157689-28-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(3-hydroxy-4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

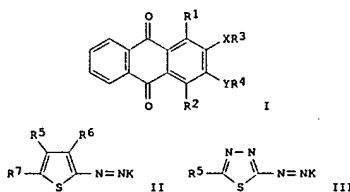
L4 ANSWER 31 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 32 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1994:422627 CAPLUS
 DOCUMENT NUMBER: 121:22627
 TITLE: Thermal transfer sheet using sublimation dye
 INVENTOR(S): Eguchi, Hiroshi; Kafuku, Masaaki; Takiguchi, Ryohei
 PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 34 pp.
 CODEN: JXXXXF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05124364	A2	19930521	JP 1991-310199	19911030
PRIORITY APPLN. INFO.:			JP 1991-310199	19911030

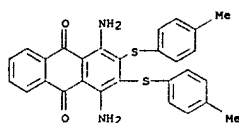
OTHER SOURCE(S): MARPAT 121:22627
 GI



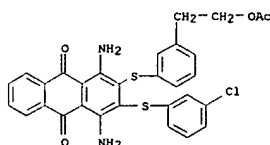
AB The title thermal transfer sheet comprises a sheet substrate and a dye layer on 1 side of the substrate, and the magenta dye contained is a mixture of ≥ 1 anthraquinone dye I [(1) X = S, O, SO2; R3 = (cyclo)alkyl, aryl, allyl; or (2) X = chemical bond; R3 = halo, CN when R1 = NH2, R2 = OH and YR4 = H; (3) X = NH; R3 as defined above; YR4 = H when R1 = R2 = OH; and (4) X, R3 as defined above; Y = X; R4 = R3 when R1 = R2 = NH2], and ≥ 1 aromatic or aromatic heterocyclic azo dye from eg. II, III (R5-7 = H, halo, NO2, CN, (substituted)amino, (cyclo)alkyl, aryl, allyl, aralkyl, alkoxy, aryloxy, arylthio, alkoxy-carbonyl, alkoxyalkyl, alkoxy-carbonylalkyl, acylamino, sulfonylamino, ureido, carbamoyl, sulfamoyl, acyl, aromatic heterocyclyl; K = p-dialkylaminophenol, p-dialkylaminopyridino). Full color images with superior high-d., sharpness, fastness and photoresistance can be obtained.

IT 154341-16-9 155524-56-4
 RL: USES (Uses)
 (dye, thermal transfer sheet using)
 RN 154341-16-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 32 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

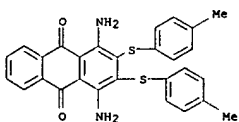


RN 155524-56-4 CAPLUS
CN 9,10-Anthracenedione,
2-([3-[2-(acetyloxy)ethyl]phenyl]thio)-1,4-diamino-3-
[(3-chlorophenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 33 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
heteroalkenyl, arylalkyl, alkoxyalkyl, oxycarbonylalkyl, carboxyalkyl, or cycloalkylalkyl; R7 = H, alkyl, or cycloalkyl; R8 = H, halogen, alkoxy, alkylthio, or arylthio; R9 = alkyl, oxycarbonyl, N-substituted aminocarbonyl, or heterocyclyl having 22 of N, O, and S; R10 = alkyl, aryl, cycloalkyl, or heterocyclyl. For IV or V, R11 = alkyl, aryl, or heterocyclyl; R12 = H, alkyl, aryl, cyano, nitro, halogen, cycloalkyl, heterocyclic aryl, R18, COR18, OSO2R18, CO2R18, OCOR18, or SO2R18; n = an integer of 1-5; R13 = alkyl, cycloalkyl, R18, COR18, OSO2R18, CO2R18, OCOR18, or SO2R18, aryl, or heterocyclic aryl; R14 = alkyl, R19, cyano, nitro, NHCOR19, NHSO2R19, or OR19; R15 = alkyl, hydroxy, R19, NHCOR20, OR20, COR20, NHSO2R20, or CO2R20; R16, R17 = H, hydroxy, cyano, nitro, alkyl, cycloalkyl, aryl, or heterocyclyl; R18 = alkyl contg. 21 group selected from O, OCO, CO2, SO2, OSO2, NH, OCO2, and hydroxy; R19 = alkyl interrupted by 21 group selected from O, OCO, CO2, SO2, OSO2, NH, and OCO2; R20 = alkyl, cycloalkyl, arylalkyl, or heterocyclic aryl; X1, Y1 = alkylene, cycloalkylene, arylalkylene, or heterocyclic arylene; X2, Y2 = cycloalkylene, arylene, or a divalent heterocyclic group. In order to adjust the hue of the transferred dye images, conventional yellow, magenta, and cyan dyes may be included in the dye transfer layer.

IT 154341-16-9
RL: TDM (Technical or engineered material use); USES (Uses)
(sublimable dye-transfer layers containing, for thermal printing materials)
RN 154341-16-9 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-methylphenyl)thio]- (9CI)
(CA INDEX NAME)

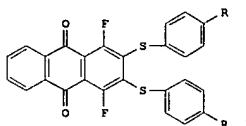


L4 ANSWER 33 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:335059 CAPLUS
DOCUMENT NUMBER: 120:335059
TITLE: Thermal-transfer printing sheet
INVENTOR(S): Eguchi, Hiroshi; Kafuku, Komei; Takiguchi, Ryohei
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 111 pp.
CODEN: EPKXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

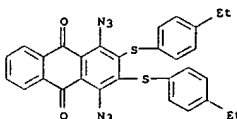
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 550817	A2	19930714	EP 1992-119569	19921116
EP 550817	A3	19930728		
EP 550817	B1	19971001		
R: DE, FR, GB				
JP 05131765	A2	19930528	JP 1991-325060	19911114
JP 06008641	A2	19940118	JP 1992-190257	19920625
JP 06099676	A2	19940412	JP 1992-276811	19920922
JP 05238170	A2	19930917	JP 1992-324699	19921111
JP 3347779	B2	20021120		
JP 2002096565	A2	20020402	JP 2001-222325	19921111
JP 05262056	A2	19931012	JP 1993-24938	19930121
JP 3248783	B2	20020604		
JP 05262062	A2	19931012	JP 1993-24940	19930121
JP 3271023	B2	20020402		
PRIORITY APPLN. INFO.:				
			JP 1991-325058	A 19911114
			JP 1991-325060	A 19911114
			JP 1992-29042	A 19920121
			JP 1992-29043	A 19920121
			JP 1992-190257	A 19920625
			JP 1992-276811	A 19920922
			JP 1992-324699	A3 19921111

OTHER SOURCE(S): MARPAT 120:335059
GI For diagram(s), see printed CA Issue.
AB A thermal-transfer printing sheet for providing a clear transferred dye image having sufficient d. and excellent stability to light comprises, on one side of a substrate, a sublimable dye transfer layer comprising a mixture of 21 dye represented by the formula I or II and 21 dye represented by the formula IV or V. For I or II, X = C(CN)A or III:
Z = CO, S, O, NH, or NR10; R1 = H, halogen, nitro, R10, OR10, SR10, or allyl; R2 = H, halogen, OR10, or SR10; R3 = H, halogen, nitro, R10, OR10, SR10, allyl, sulfamoyl, carbamoyl, acyl, acylamido, sulfamido, ureido, or N(R10)2; R4 = H, halogen, CO2R10, OR10, SR10, cyano, carbamoyl, or sulfamoyl; R5 = H, halogen, OR10, or SR10; R6 = H, R10, allyl, alkenyl,

L4 ANSWER 34 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:54298 CAPLUS
DOCUMENT NUMBER: 120:54298
TITLE: Reaction of 1,2,3,4-tetrafluoro-9,10-anthraquinone with thiophenols
AUTHOR(S): Gornostaev, L. M.; Lavrikova, T. I.; Arnol'd, E. V.
CORPORATE SOURCE: Krasnoyarsk. Gos. Med. Inst., Krasnoyarsk, Russia
SOURCE: Zhurnal Organicheskoi Khimii (1992), 28(11), 2291-3
CODEN: ZORKAE; ISSN: 0514-7492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI

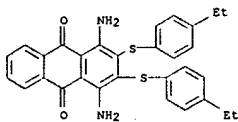


AB Reaction of 1,2,3,4-tetrafluoro-9,10-anthraquinone by 4-RC6H4SH (R = H, Me, Et, Cl, Br) in alc. KOH gave 79-85% anthraquinones I. Azidation of I (R = Et) gave the corresponding 1,4-diazido derivative which was reduced by Zn-AcOH to give the corresponding diamine; the latter was also obtained by treating 1,4-diamino-2,3-dichloro-9,10-anthraquinone with 4-EtC6H4SH.
IT 152027-87-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and reduction by zinc-acetic acid)
RN 152027-87-7 CAPLUS
CN 9,10-Anthracenedione, 1,4-diazido-2,3-bis[(4-ethylphenyl)thio]- (9CI)
(CA INDEX NAME)

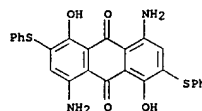


IT 152027-88-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 152027-88-8 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-ethylphenyl)thio]- (9CI)
(CA INDEX NAME)

L4 ANSWER 34 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
INDEX NAME)

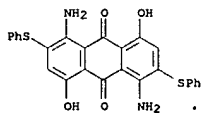


L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:425537 CAPLUS
DOCUMENT NUMBER: 113:25537
TITLE: 1,5-Dihydroxy-4,8-diamino- and 1,8-dihydroxy-4,5-diaminoanthraquinone β -ethers and thioethers. Blue dyes for synthetic polymer fibers
AUTHOR(S): Peters, Arnold T.
CORPORATE SOURCE: Dep. Chem. Chem. Technol., Univ. Bradford, Bradford/West Yorkshire, BD7 1DP, UK
SOURCE: Journal of Chemical Technology and Biotechnology (1990), 48(2), 135-43
CODEN: JCTBED; ISSN: 0268-2575
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:25537
AB Condensation of mono- and dibromo deriva. of 1,5-dihydroxy-4,8-diaminoanthraquinone and of 1,8-dihydroxy-4,5-diaminoanthraquinone with phenols and thiols gave the corresponding β -ethers and thioethers. These compds. colored polyester in bright reddish-blue to greenish-blue hues of generally good fastness to light and sublimation. The color of the dyes was discussed with respect to the nature and orientation of the β -substituent.
IT 95950-97-3P 128029-94-7P 128030-00-2P
128030-01-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
RN 95950-97-3 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-dihydroxy-2,6-bis(phenylthio)- (9CI)
(CA INDEX NAME)

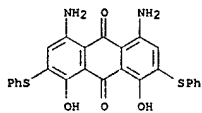


RN 128029-94-7 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-dihydroxy-2,6-bis(phenylthio)- (9CI)
(CA INDEX NAME)

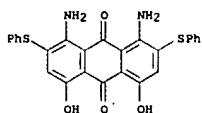
L4 ANSWER 35 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



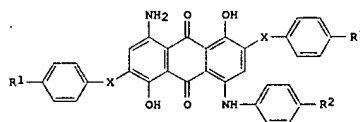
RN 128030-00-2 CAPLUS
CN 9,10-Anthracenedione, 4,5-diamino-1,8-dihydroxy-2,7-bis(phenylthio)- (9CI)
(CA INDEX NAME)



RN 128030-01-3 CAPLUS
CN 9,10-Anthracenedione, 1,8-diamino-4,5-dihydroxy-2,7-bis(phenylthio)- (9CI)
(CA INDEX NAME)

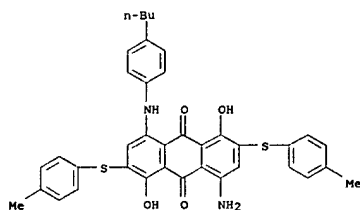


L4 ANSWER 36 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:203073 CAPLUS
DOCUMENT NUMBER: 110:203073
TITLE: Guest-host liquid crystal display devices
INVENTOR(S): Yamamoto, Kazuko; Kashiwagi, Takafumi
PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKOXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
PATENT NO. KIND DATE APPLICATION NO. DATE
JP 63278994 A2 19881116 JP 1987-115012 19870512
PRIORITY APPL. INFO.: JP 1987-115012 19870512
OTHER SOURCE(S): MARPAT 110:203073
GI



AB Title devices contain 22 dichroic dyes which include anthraquinones of the formula I (X = C6H4, S, O; R1, R2 = alkyl, alkoxy). The devices show improved light resistance. Thus, a liquid crystal display cell filled with ZLI 1840 containing 1% BuO2CO(p-C6H4N:N)3-p-C6H4NBu2 and 1% I (X = p-C6H4; R1 = OC6H13; R2 = Bu) showed no change in absorption even after a 1000-h exposure to a Xe lamp.
IT 108577-54-4
RL: USES (Uses)
(guest-host liquid crystal displays containing dichroic, with good light resistance)
RN 108577-54-4 CAPLUS
CN 9,10-Anthracenedione, 4-amino-8-[(4-butylphenyl)amino]-1,5-dihydroxy-2,6-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 36 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

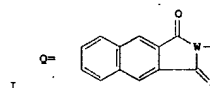
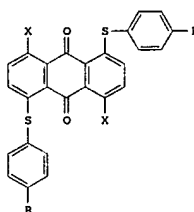


L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:592167 CAPLUS
 DOCUMENT NUMBER: 109:192167
 TITLE: Anthraquinone dyes and polarizing filters containing them
 INVENTOR(S): Miura, Konoe; Ozawa, Tetsuo; Okumura, Seigo; Kubo, Shinji
 PATENT ASSIGNEE(S): Mitsubishi Kasei Corp., Japan
 SOURCE: Eur. Pat. Appl., 21 pp.
 CODEN: EPXXDM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 275077	A1	19880720	EP 1988-100310	19880112
EP 275077	B1	19920205		
R: CH, DE, FR, GB, LI				
JP 63174969	A2	19880719	JP 1987-5569	19870113
JP 07035480	B4	19950419		
JP 63196659	A2	19880815	JP 1987-28696	19870210
JP 07062110	B4	19950705		
US 4841057	A	19890620	US 1988-143366	19880112
CA 1276016	A1	19901106	CA 1988-556343	19880112
US 4921959	A	19900501	US 1989-344204	19890427
PRIORITY APPL. INFO.:			JP 1987-5569	A 19870113
			JP 1987-28696	A 19870210
			US 1988-143366	A3 19880112

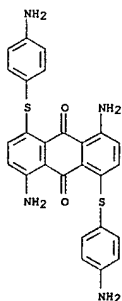
OTHER SOURCE(S): CASREACT 109:192167; MARPAT 109:192167
 GI



L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

AB The title compds. I (R = H, NHCOR1, CONHR1, (un)substituted carboximido; R1 = (un)substituted aryl, (un)substituted cycloalkyl; X = H, NH2; such that R = X = H), useful in polarizing filters, are prepared
 1,5-Bis(4-aminophenylthio)anthraquinone was condensed with 2,3-naphthalenedicarboxylic acid anhydride at 150° in DMF for 4 h, producing I (R = Q, X = H), 1 g of which was melt-mixed with 1 kg poly(ethylene naphthalate) resin at 300°, and the mixture molded into a 100-nm-thick yellow film, having λmax 448 nm and coefficient of dye orientation 0.84.

IT 117380-34-4
 RL: USES (Uses)
 (condensation of, with benzoyl chloride)
 RN 117380-34-4 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-aminophenyl)thio]- (9CI)
 (CA INDEX NAME)

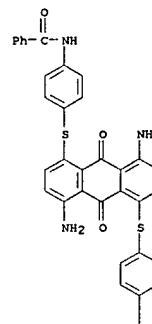


IT 117380-32-2P 117380-33-3P 117380-35-5P
 117380-36-6P 117380-39-9P 117380-40-2P
 117380-42-4P 117380-43-5P 117380-44-6P
 117380-45-7P 117380-46-8P 117380-47-9P
 117380-48-0P 117380-50-4P 117380-51-5P
 117380-52-6P 117380-53-7P 117380-54-8P
 117380-55-9P 117380-56-0P 117380-57-1P
 117380-58-2P 117380-59-3P 117380-60-6P
 117380-62-8P 117407-20-2P 117407-21-3P
 117407-22-4P 117410-84-1P 117410-85-2P
 117410-86-3P

RL: PREP (Preparation)
 (manufacture of, as dye for polarizing filters)
 RN 117380-32-2 CAPLUS
 CN Benzamide, N,N'-1,4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediylbis(thio-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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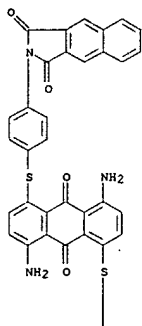
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RN 117380-33-3 CAPLUS
 CN 1H-Benz[1,3(2H)-dione, 2,2'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

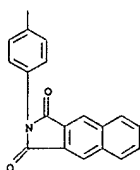
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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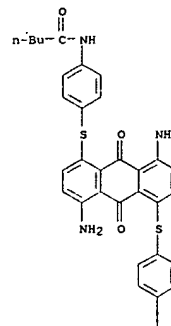
RN 117380-35-5 CAPLUS
CN Pentanamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

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L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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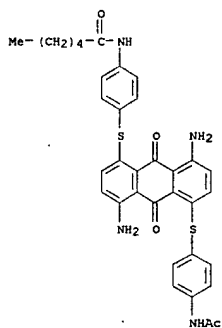


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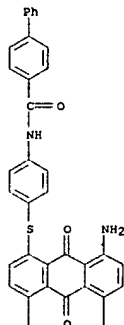
RN 117380-36-6 CAPLUS
CN Hexanamide, N-[4-[[5-[[4-(acetylamino)phenyl]thio]-4,8-diamino-9,10-dihydro-9,10-dioxo-1-anthracenyl]thio]phenyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



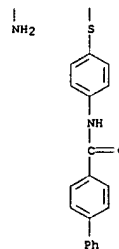
RN 117380-39-9 CAPLUS
CN [1,1'-Biphenyl]-4-carboxamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

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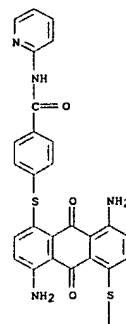
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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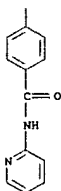


RN 117380-40-2 CAPLUS
CN Benzamide, 4,4'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio)]bis(N-2-pyridinyl)- (9CI) (CA INDEX NAME)

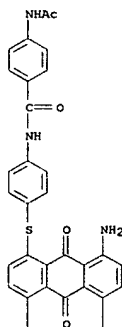
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L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
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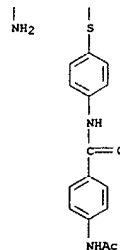


RN 117380-42-4 CAPLUS
CN Benzamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis[4-(acetylamino)- (9CI) (CA INDEX NAME)

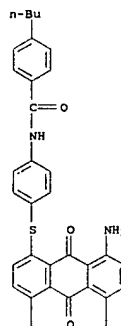


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L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
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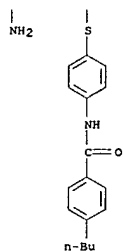


RN 117380-43-5 CAPLUS
CN Benzamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis[4-butyl- (9CI) (CA INDEX NAME)



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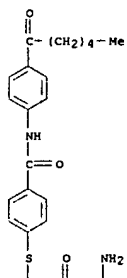
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



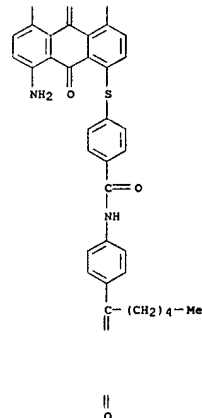
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RN 117380-44-6 CAPLUS
CN Benzamide, 4,4'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio)]bis[N-[4-(1-oxohexyl)phenyl]- (9CI) (CA INDEX NAME)

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L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
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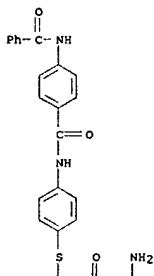


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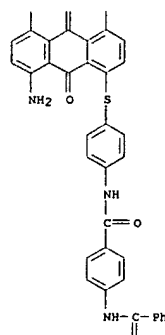
RN 117380-45-7 CAPLUS
CN Benzamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis[4-(benzoylamino)- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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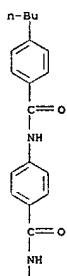
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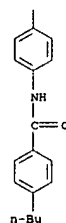
RN 117380-46-8 CAPLUS
CN Benamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis[4-[(4-butylbenzoyl)amino]-(9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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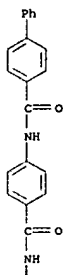
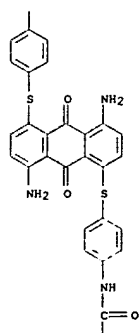
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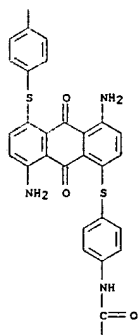
RN 117380-47-9 CAPLUS
CN [1,1'-Biphenyl]-4-carboxamide,
N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenyleneiminocarbonyl-4,1-phenylene)]bis-(9CI) (CA INDEX NAME)

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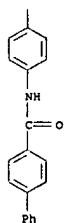
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L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
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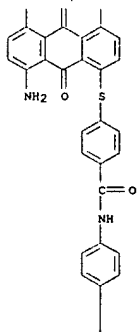
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RN 117380-48-0 CAPLUS
CN Benzamide, 4,4'-bis[thio]bis[N-(4-cyclohexylphenyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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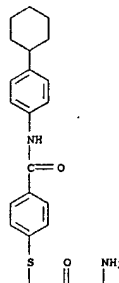


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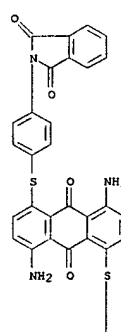


RN 117380-50-4 CAPLUS
CN 1H-Indole-1,3(2H)-dione,
2,2'-bis[thio]bis[4,1-phenylene]bis- (9CI) (CA INDEX NAME)

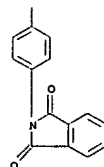
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
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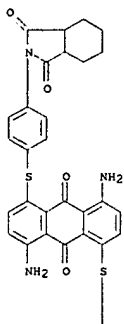
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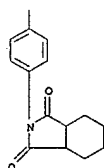
RN 117380-51-5 CAPLUS
CN 1H-Indole-1,3(2H)-dione,
2,2'-bis[thio]bis[4,1-phenylene]bis(hexahydro- (9CI) (CA INDEX NAME)

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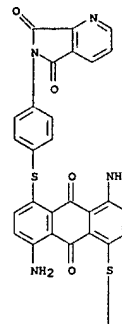
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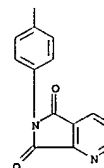
RN 117380-52-6 CAPLUS
 CN 5H-Pyrrolo[3,4-b]pyridine-5,7(6H)-dione, 6,6'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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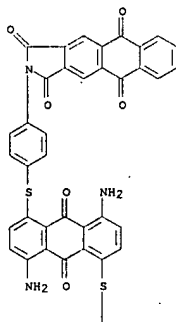
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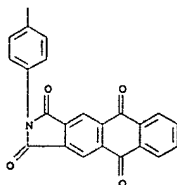
RN 117380-53-7 CAPLUS
 CN 1H-Naphth[2,3-f]isoindole-1,3,5,10(2H)-tetrone, 2,2'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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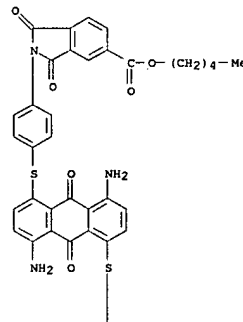
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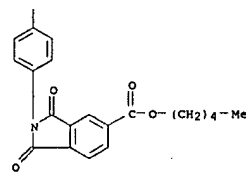
RN 117380-54-8 CAPLUS
 CN 1H-Isoindole-1,3(2H)-dione, 2,2'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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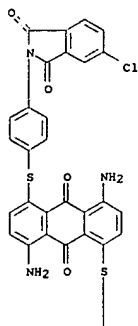
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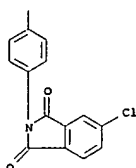
RN 117380-55-9 CAPLUS
 CN 1H-Isoindole-1,3(2H)-dione, 2,2'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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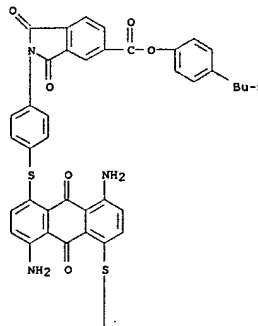
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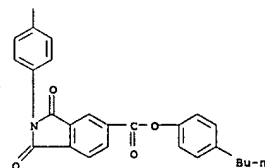
RN 117380-56-0 CAPLUS
 CN 1H-isoindole-5-carboxylic acid,
 2,2'-bis((4,8-diamino-9,10-dihydro-9,10-dioxo-
 1,5-anthracenediyl)bis(thio-4,1-phenylene))bis(2,3-dihydro-1,3-dioxo-
 bis(4-butylphenyl) ester (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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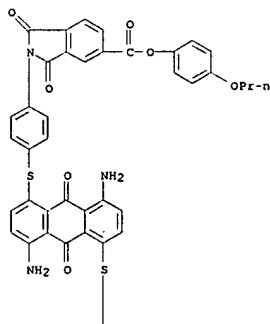
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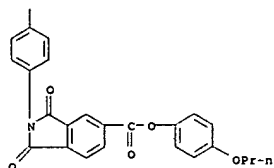
RN 117380-57-1 CAPLUS
 CN 1H-isoindole-5-carboxylic acid,
 2,2'-bis((4,8-diamino-9,10-dihydro-9,10-dioxo-
 1,5-anthracenediyl)bis(thio-4,1-phenylene))bis(2,3-dihydro-1,3-dioxo-
 bis(4-propoxyphenyl) ester (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-A



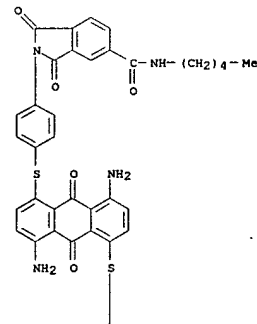
PAGE 2-A



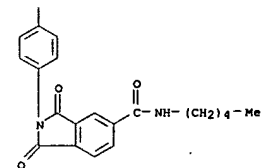
RN 117380-58-2 CAPLUS
 CN 1H-isoindole-5-carboxamide,
 2,2'-bis((4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene))bis(2,3-dihydro-1,3-dioxo-N-pentyl-
 (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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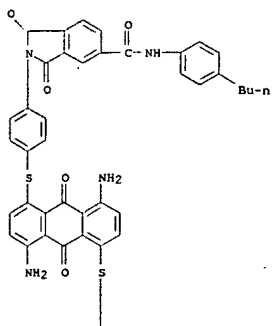
PAGE 2-A



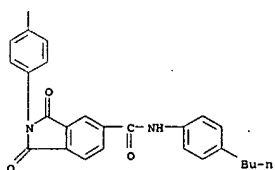
RN 117380-59-3 CAPLUS
 CN 1H-isoindole-5-carboxamide,
 2,2'-bis((4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene))bis(N-(4-butylphenyl)-2,3-dihydro-
 1,3-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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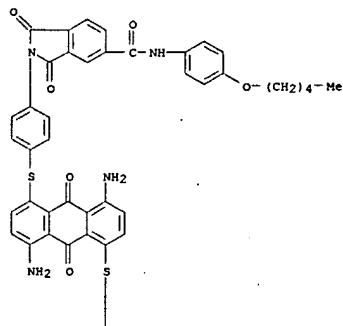
PAGE 2-A



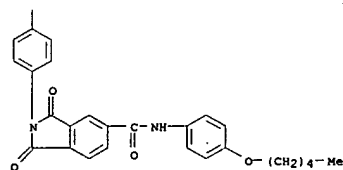
RN 117380-60-6 CAPLUS
 CN 1H-Isoindole-5-carboxamide,
 2,2'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-N-[4-
 (pentyloxy)phenyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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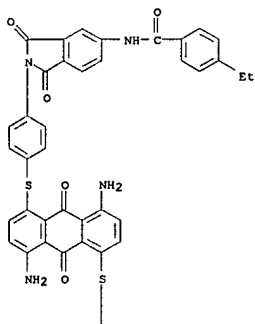
PAGE 2-A



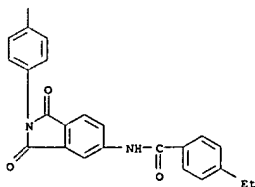
RN 117380-62-8 CAPLUS
 CN Benzamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-2H-isoindole-
 2,5-diyl]]bis[4-ethyl- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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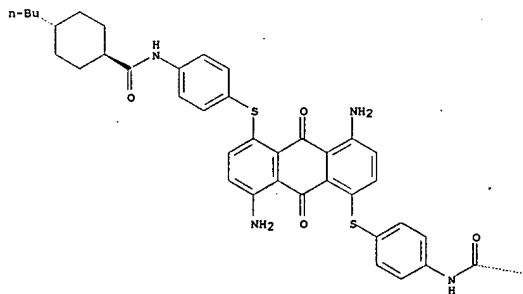


RN 117407-20-2 CAPLUS
 CN Cyclohexanecarboxamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene)]bis[4-butyl-, (trans(trans))-
 (9CI) (CA INDEX NAME)

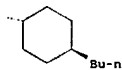
Relative stereochemistry.

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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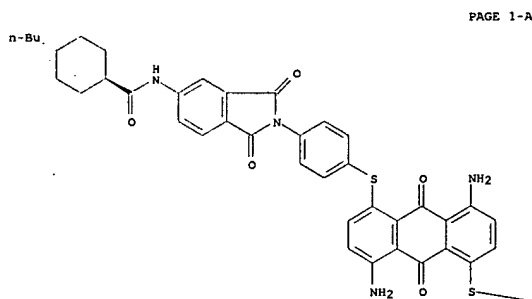


PAGE 1-B

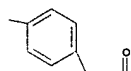


RN 117407-21-3 CAPLUS
 CN Cyclohexanecarboxamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-
 anthracenediyl)bis(thio-4,1-phenylene)]bis[2,3-dihydro-1,3-dioxo-2H-isoindole-
 2,5-diyl]]bis[4-butyl-, (trans(trans))- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
Relative stereochemistry.



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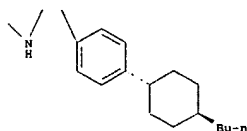
L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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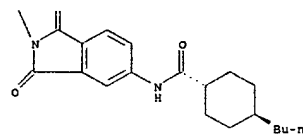
PAGE 2-B



RN 117410-84-1 CAPLUS
CN Benzamide, N,N'-[4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]bis(thio-4,1-phenylene)]bis[4-(hexyloxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

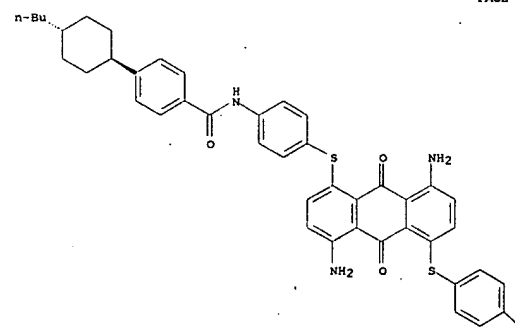
PAGE 2-B



RN 117407-22-4 CAPLUS
CN Benzamide, N,N'-[4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl]bis(thio-4,1-phenylene)]bis[4-(4-butylcyclohexyl)-, [trans(trans)]- (9CI) (CA INDEX NAME)

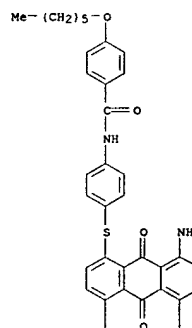
Relative stereochemistry.

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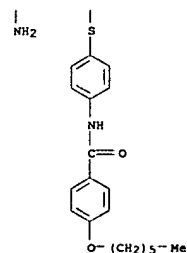


L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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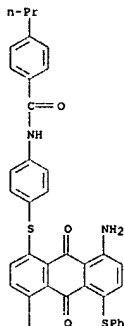
PAGE 2-A



RN 117410-85-2 CAPLUS
CN Benzamide, N-[4-[[4,8-diamino-9,10-dihydro-9,10-dioxo-5-(phenylthio)-1-anthracenyl]thio]phenyl]-4-propyl- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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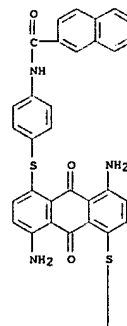
PAGE 2-A



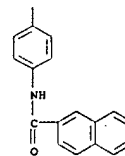
RN 117410-86-3 CAPLUS
 CN 2-Naphthalenecarboxamide, N,N'-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

L4 ANSWER 37 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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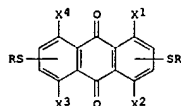


L4 ANSWER 38 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:29599 CAPLUS
 DOCUMENT NUMBER: 108:29599
 TITLE: Anthraquinones containing substituted mercapto groups as dichroic dyes for liquid crystal displays
 INVENTOR(S): Shimizu, Yasutaka; Kojima, Kiyoteru; Nakanishi, Hiroto; Hiohi, Takeshi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JHXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION: 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62161755	A2	19870717	JP 1986-1915	19860107
JP 06096548	B4	19941130	JP 1986-1915	19860107

GI



AB The title compds. I (R = (substituted) alkyl, aralkyl, aryl, cycloalkyl, heterocyclyl; X1 = NH2, lower alkylamino; X2 = OH, lower alkylamino; X3-4 = OH, NH2, lower alkylamino; either X3 or X4 = OH and the other = lower alkylamino when X2 = OH; SR and OH are vicinal) are prepared. The compds. are useful as dichroic dyes for liquid crystal display, recording medium for optical disks, colorants for near-IR control filters, and electrophotog. photoconductors. Thus, 1-amino-8-methylamino-4,5-dihydroxy-3,6-bis(isopropylmercapto)anthraquinone, prepared by substitution of 1-amino-8-methylamino-4,5-dihydroxy-3,6-dibromoanthraquinone with Me2CHSH,

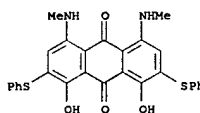
were dissolved in ZLI-1840 and used to form a liquid crystal display cell which turned almost colorless from its original bluish green by 6-V charge and showed dichroic ratio 8.5.

IT 111918-28-6P 111918-29-7P 111918-30-0P
 111918-31-1P

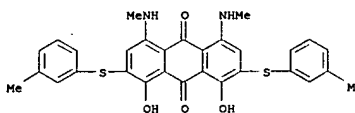
RL: PREP (Preparation)
 (preparation of, as dye for liquid crystal displays and near-IR control filters and optical disks)

RN 111918-28-6 CAPLUS
 CN 9,10-Anthracenedione, 1,8-dihydroxy-4,5-bis(methylamino)-2,7-bis(phenylthio)- (9CI) (CA INDEX NAME)

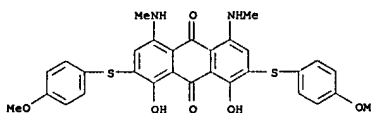
L4 ANSWER 38 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



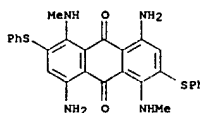
RN 111918-29-7 CAPLUS
 CN 9,10-Anthracenedione, 1,8-dihydroxy-4,5-bis(methylamino)-2,7-bis[(3-methylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 111918-30-0 CAPLUS
 CN 9,10-Anthracenedione, 1,8-dihydroxy-2,7-bis[(4-methoxyphenyl)thio]-4,5-bis(methylamino)- (9CI) (CA INDEX NAME)



RN 111918-31-1 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis(methylamino)-2,6-bis(phenylthio)- (9CI) (CA INDEX NAME)

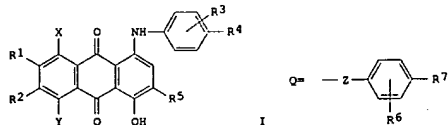


10817271.trn

L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1987:215497 CAPLUS
 DOCUMENT NUMBER: 106:215497
 TITLE: Preparation of anthraquinone derivatives as dyes for liquid crystals
 INVENTOR(S): Morishita, Yasuyoshi; Matsunaga, Daisaku; Oiso, Shoji
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKKXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62005941	A2	19870112	JP 1985-291950	19851226
JP 05058621	B4	19930827		
PRIORITY APPLN. INFO.:			JP 1985-50268	A1 19850315

GI



AB The title compds. I [when X = H or NH₂, Y = OH, R₁ = H, R₂ = Cl, Br, Q; when X = OH, Y = H or NH₂, R₁ = Cl, Br, Q, R₂ = H; Z = O, S; R₃, R₆ = H, F, Cl, Br, Me, Et, cyano, MeO, EtO; R₄, R₇ = H, F, Cl, Br, cyano, CF₃, CF₃(CF₂)₃, (substituted) alkyl, (substituted) alkoxy, acyl, acylamino, etc.; R₅ = Q], useful as liquid crystal compns. such as dyes for a guest-host effect liquid crystal display device, are prepared Heating p-Bu₄COH 15.9, N-methylpyrrolidone 30, and K₂CO₃ 3 parts at 150°, adding 11.2 parts I (R₁ = R₅ = Br; R₂ = R₃ = H; R₄ = Bu; X = OH; Y = NH₂) and heating at 160° gave 4.2 parts I (R₁ = R₅ = Q where R₆ = H, R₇ = Bu, Z = O, R₂ = R₃ = H; R₄ = Bu; X = OH; Y = NH₂) (II), whose acetone solution was blue. The dichroic ratios and solubilities (at 20°) of 11% II with ZLI-1565 (Merck), E-8 (BDH) and ZLI-1840 (Merck) were 10.5

and

5.4%, 10.9 and 5.8%, and 11.2 and 5.0%, resp.

IT 108577-54-4P 108577-68-0P 108577-79-3P

108578-34-3P

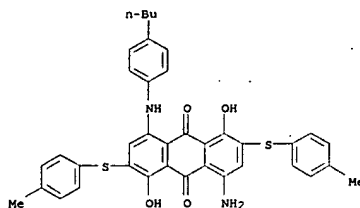
RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of, as dye for liquid crystal display elements)

RN 108577-54-4 CAPLUS

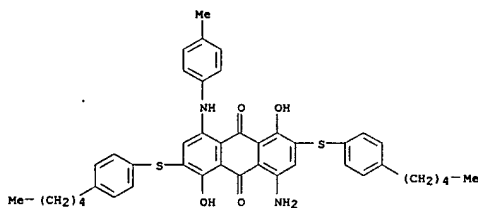
CN 9,10-Anthracenedione, 4-amino-8-[(4-butylphenyl)amino]-1,5-dihydroxy-2,6-

L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 108577-68-0 CAPLUS

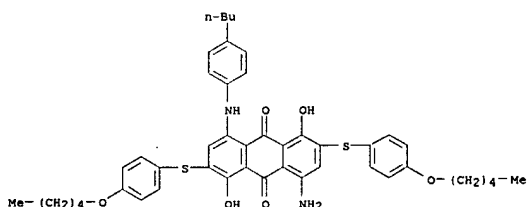
CN 9,10-Anthracenedione, 4-amino-8-[(4-methylphenyl)amino]-2,6-bis[(4-pentylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 108577-79-3 CAPLUS

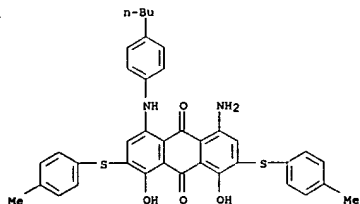
CN 9,10-Anthracenedione, 4-amino-8-[(4-butylphenyl)amino]-1,5-dihydroxy-2,6-bis[(4-pentylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 39 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 108578-34-3 CAPLUS

CN 9,10-Anthracenedione, 4-amino-8-[(4-butylphenyl)amino]-1,8-dihydroxy-2,7-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 40 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1987:19986 CAPLUS

DOCUMENT NUMBER: 106:19986

TITLE: Dichroic anthraquinone dyes for liquid crystals

INVENTOR(S): Yamada, Yasuyuki; Nishizawa, Isao; Nakatsuka, Masakatsu; Aiga, Hiroshi; Igata, Akitoshi; Kato, Kimitoshi

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKKXAF

DOCUMENT TYPE: Patent

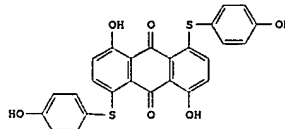
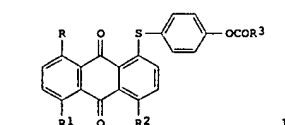
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61087756	A2	19860506	JP 1984-210066	19841005
JP 05082422	B4	19931118		
PRIORITY APPLN. INFO.:			JP 1984-210066	19841005

GI



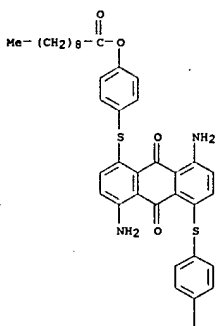
AB Liquid crystal dyes I [R₁, R₂ = H, OH, NH₂, SC₆H₄OH-4, SC₆H₄OCOR₄; R₃, R₄ = alkyl, (un)substituted Ph, cyclohexyl] show a high dichroic ratio and good stability. Thus, treating II with 3,5,5-trimethylhexanoyl chloride in pyridine at 90-100° for 2 h gave a mixture of I (R = R₂ = OH, R₁ = SC₆H₄OCOR₄CH₂CHMeCH₂Me-4, R₃ = CH₂CHMeCH₂Me-3; and R₄ = OH; R₁ = SC₆H₄OH-4, R₃ = CH₂CHMeCH₂Me-3). A mixture of 10 parts of ZLI-1840 and

0.05 part I had a dichroic ratio (at λ_{max} 580 nm) of 13.5.

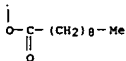
IT 106027-96-7P
 RL: PREP (Preparation)

L4 ANSWER 40 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 (manuf. of, 725 dye for liq. crystals)
 RN 106027-96-7 CAPLUS
 CN Decanoic acid, (4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio-4,1-phenylene) ester (9CI) (CA INDEX NAME)

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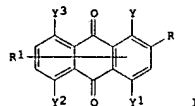
PAGE 2-A



L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 1987:19983 CAPLUS
 ACCESSION NUMBER:
 DOCUMENT NUMBER: 106:19983
 TITLE: Anthraquinone dyes, their preparation and application,
 and anthraquinone dye-containing dichroic materials
 PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
 SOURCE: Neth. Appl., 67 pp.
 CODEN: NAOXAN
 DOCUMENT TYPE: Patent
 LANGUAGE: Dutch
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 8401263	A	19851118	NL 1984-1263	19840418
PRIORITY APPLN. INFO.:			NL 1984-1263	19840418

GI



AB Anthraquinone dyes are prepared with formula I (R is alkyl, aralkyl, CO-2-alkyl, CO-2-aralkyl, CO-2-aryl, O-alkyl, O-aralkyl, CN, NO2, CF3, halogen, or heterocyclic substituent; R1 = H or R; 2 = O, S, NH, or a direct bond; Y, Y1, Y2, and Y3 = H, NH2, OH, halogen, NO2, or arylmercapto). The alkyl, aryl, aralkyl, and heterocyclic substituents can themselves be substituted, and the alkyl chains can contain O atoms. At least 1 of the Y-Y3 groups is arylmercapto. The dyes can be used in synthetic polymers, liquid crystals, and dichroic materials (i.e., at 0.01-30, preferably 0.1-10, weight% concentration). Thus, a bluish-red dye (I, Y = NH2, R = Me, R1 = Y2 = Y3 = H, Y1 = S-4-C6H4-CMe3) was prepared with
 CINC indicator number 10. In a nematic phase (0.5 weight% in alkyl cyanoaryl cyclohexane mixts.), it had an order parameter of 0.69; in a liquid-crystal phase, the dye (0.5 weight% in alkylcyanobiphenyl mixts.) had an order parameter of 0.70.
 IT 94150-14-8 94150-15-9 94150-16-0
 94150-17-1 94150-18-2 94150-19-3
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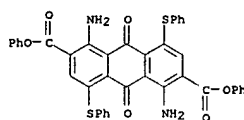
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

94150-26-2 94150-27-3 94150-28-4
 94150-29-5 94150-30-8 94150-31-9
 94150-32-0 94150-33-1 94150-34-2
 94150-35-3 94150-36-4 94150-37-5
 94150-38-6 94150-39-7 94150-40-0
 94150-41-1 94150-42-2 94150-43-3
 94150-44-4 94150-45-5 94150-46-6
 94150-47-7 94150-48-8 94150-49-9
 94150-50-2 94150-51-3 94150-52-4
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 94150-59-1 94150-60-4 94150-61-5
 94150-62-6 94150-63-7 94150-64-8
 94150-65-9 94150-67-1 94150-68-2
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 94150-87-5 94150-88-6 94150-89-7
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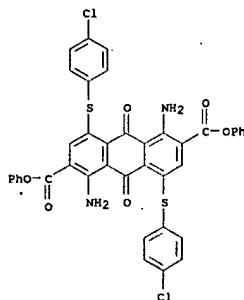
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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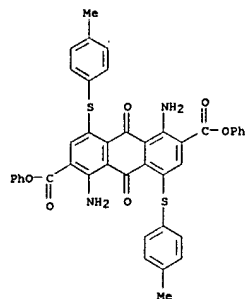
RN 94150-14-8 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis(phenylthio)-, diphenyl ester (9CI) (CA INDEX NAME)



RN 94150-15-9 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-4,8-bis((4-chlorophenyl)thio)-9,10-dihydro-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

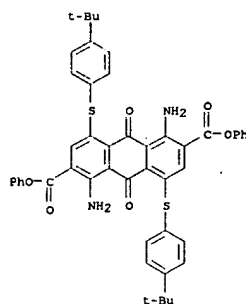


L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 94150-16-0 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

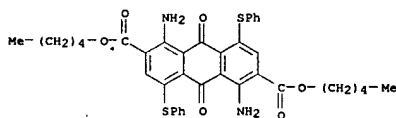


RN 94150-17-1 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

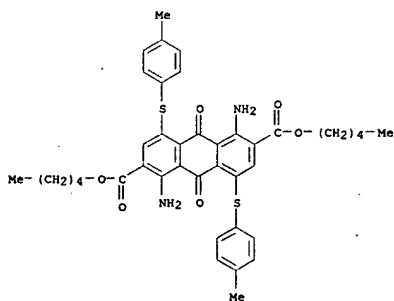


RN 94150-18-2 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis[(phenylthio)-, dipentyl ester (9CI) (CA INDEX NAME)

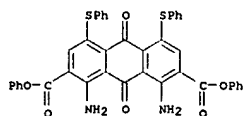


RN 94150-19-3 CAPLUS
 CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

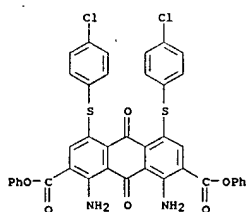


RN 94150-20-6 CAPLUS
 CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-9,10-dioxo-4,5-bis[(phenylthio)-, dipentyl ester (9CI) (CA INDEX NAME)

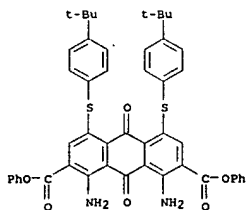


RN 94150-21-7 CAPLUS
 CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

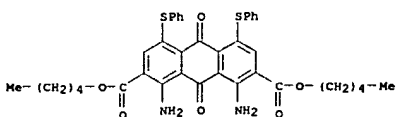
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 94150-22-8 CAPLUS
 CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

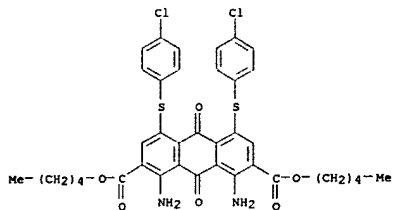


RN 94150-23-9 CAPLUS
 CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-9,10-dioxo-4,5-bis[(phenylthio)-, dipentyl ester (9CI) (CA INDEX NAME)

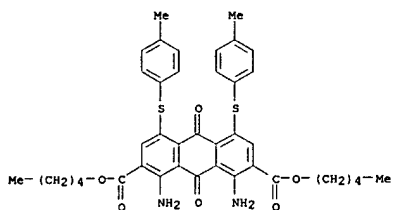


RN 94150-24-0 CAPLUS
 CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
9,10-dihydro-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

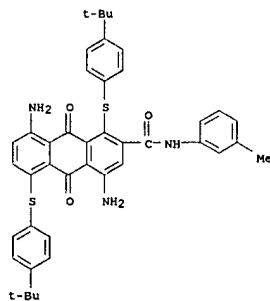


RN 94150-25-1 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-4,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

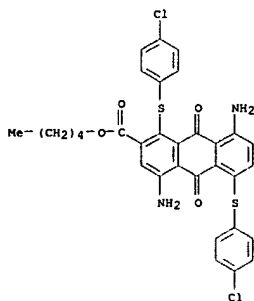


RN 94150-26-2 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
(9CI) (CA INDEX NAME)

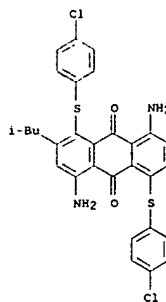


RN 94150-29-5 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

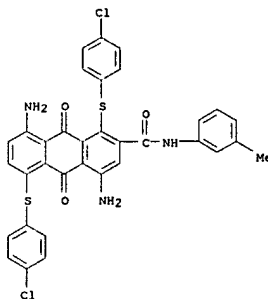


RN 94150-30-8 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

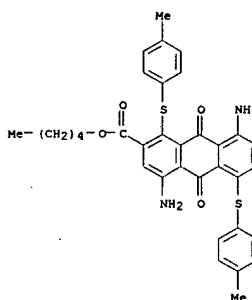


RN 94150-27-3 CAPLUS
CN 2-Anthracenecarboxamide, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-N-(3-methylphenyl)-9,10-dioxo- (9CI) (CA INDEX NAME)

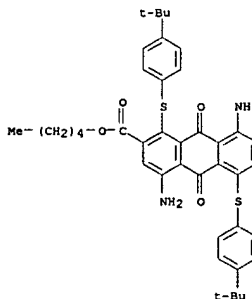


RN 94150-28-4 CAPLUS
CN 2-Anthracenecarboxamide, 4,8-diamino-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-N-(3-methylphenyl)-9,10-dioxo-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

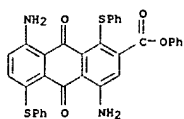


RN 94150-31-9 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

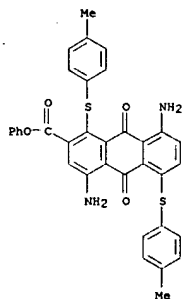


RN 94150-32-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

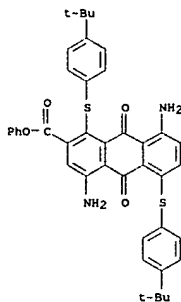


RN 94150-33-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenylthio)-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

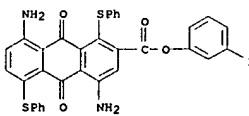


RN 94150-34-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(1,1-dimethylethyl)phenylthio]-9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

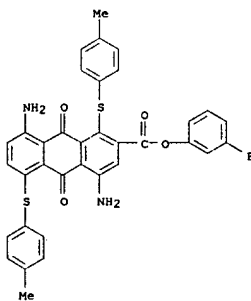


RN 94150-35-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

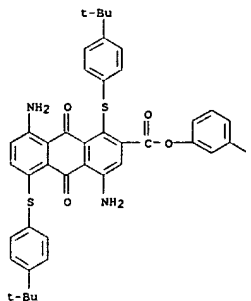


RN 94150-36-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenylthio)-9,10-dioxo-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

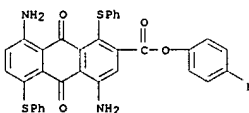


RN 94150-37-5 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(1,1-dimethylethyl)phenylthio]-9,10-dihydro-9,10-dioxo-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

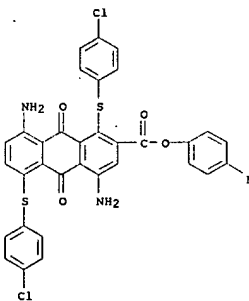


RN 94150-38-6 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

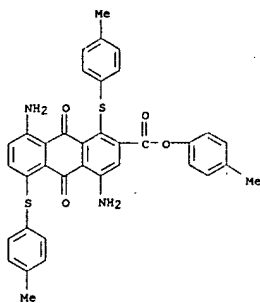


RN 94150-39-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-chlorophenylthio)-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

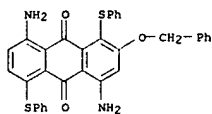


RN 94150-40-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenylthio)-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

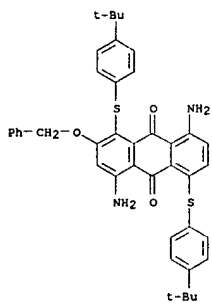


RN 94150-41-1 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-2-(phenylmethoxy)-1,5-bis(phenylthio)- (9CI) (CA INDEX NAME)

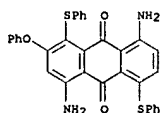


RN 94150-42-2 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

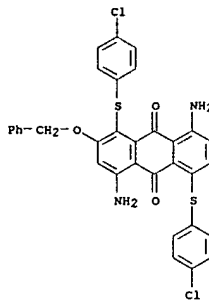


RN 94150-43-5 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-2-phenoxy-1,5-bis(phenylthio)- (9CI) (CA INDEX NAME)

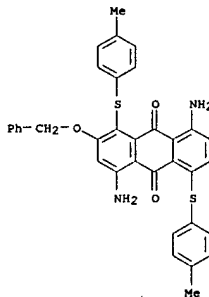


RN 94150-46-6 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-methylphenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

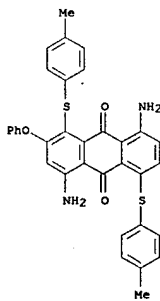


RN 94150-43-3 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

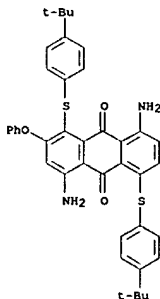


RN 94150-44-4 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

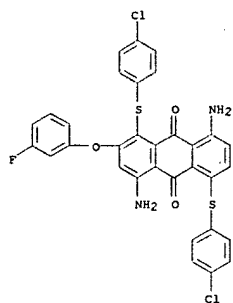


RN 94150-47-7 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

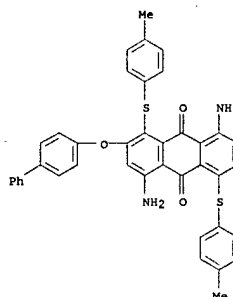


RN 94150-48-8 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

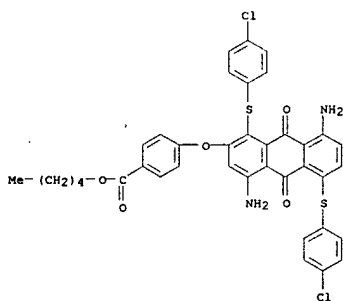


RN 94150-49-9 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-2-((1,1'-biphenyl)-4-yloxy)-1,5-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

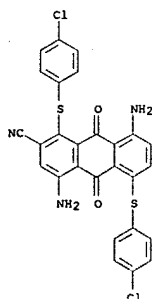


RN 94150-50-2 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-2-((1,1'-biphenyl)-4-yloxy)-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

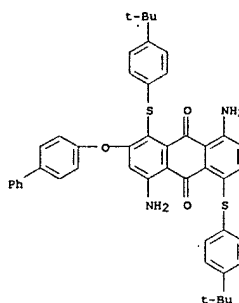


RN 94150-53-5 CAPLUS
CN 2-Anthracenecarbonitrile, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

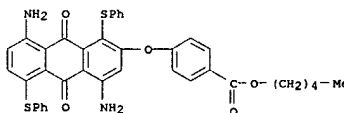


RN 94150-54-6 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

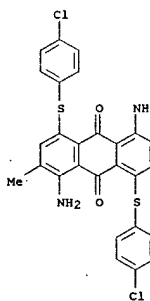


RN 94150-51-3 CAPLUS
CN Benzoic acid, 4-[[[4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

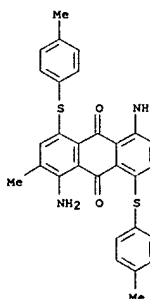


RN 94150-52-4 CAPLUS
CN Benzoic acid, 4-[[[4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

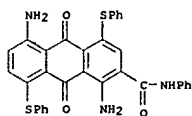


RN 94150-55-7 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-methyl-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

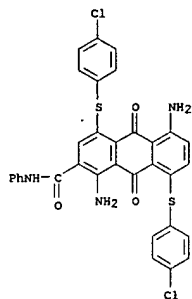


RN 94150-59-1 CAPLUS
CN 2-Anthracenecarboxamide, 1,5-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

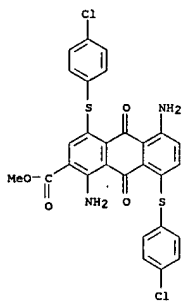


RN 94150-60-4 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

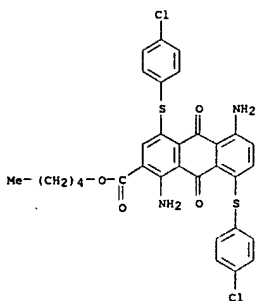


RN 94150-61-5 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

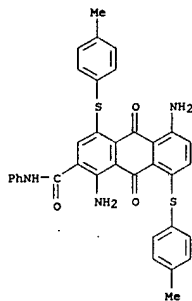


RN 94150-64-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

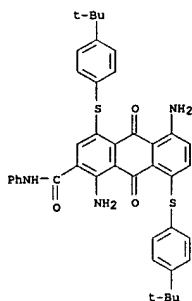


RN 94150-65-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

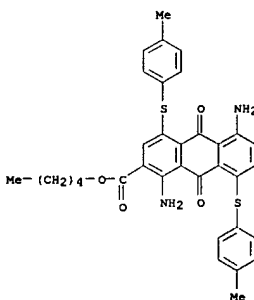


RN 94150-62-6 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

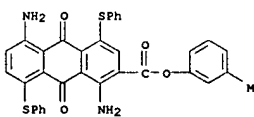


RN 94150-63-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

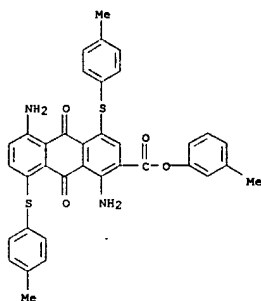


RN 94150-67-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

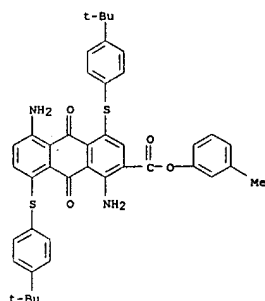


RN 94150-68-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

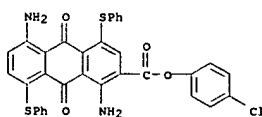


RN 94150-69-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

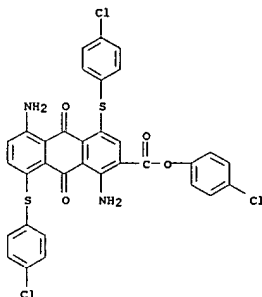


RN 94150-70-6 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

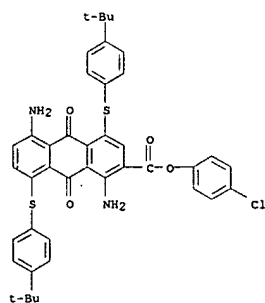


RN 94150-71-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 4-chlorophenyl ester (9CI) (CA INDEX NAME)

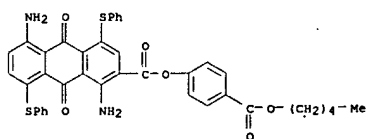


RN 94150-72-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 4-chlorophenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

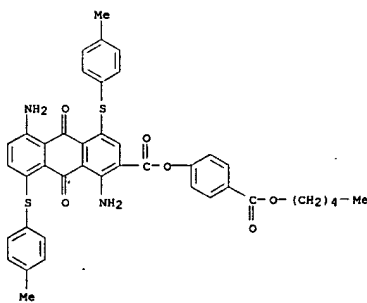


RN 94150-73-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

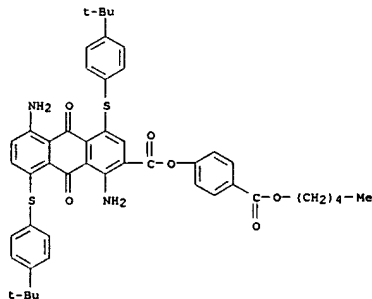


RN 94150-74-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

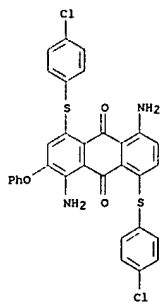


RN 94150-75-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

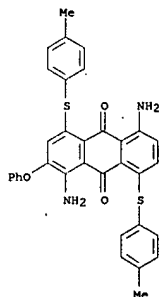


RN 94150-76-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

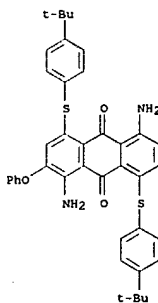


RN 94150-77-3 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-4,8-bis[(4-methylphenyl)thio]-2-phenoxy-
(9CI) (CA INDEX NAME)

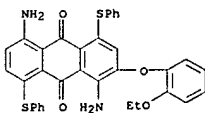


RN 94150-78-4 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

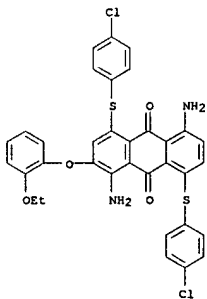


RN 94150-79-5 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-2-(2-ethoxyphenoxy)-4,8-bis(phenylthio)-
(9CI) (CA INDEX NAME)

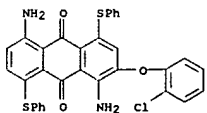


RN 94150-80-8 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

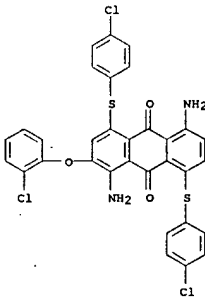


RN 94150-81-9 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-2-(2-chlorophenoxy)-4,8-bis(phenylthio)-
(9CI) (CA INDEX NAME)

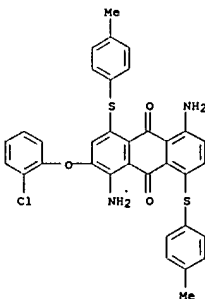


RN 94150-82-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(2-chlorophenoxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

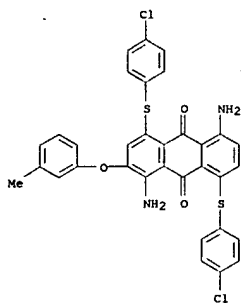


RN 94150-83-1 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(2-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

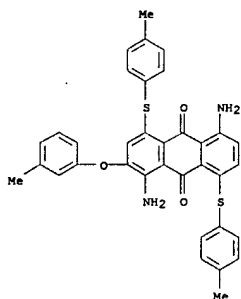


RN 94150-84-2 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

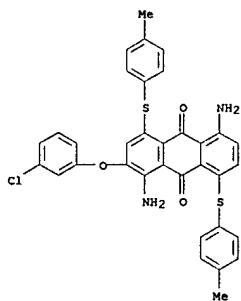


RN 94150-85-3 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-methylphenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

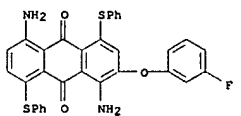


RN 94150-86-4 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

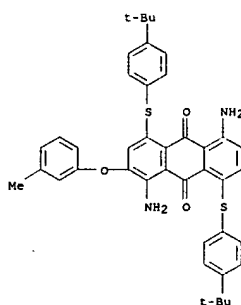


RN 94150-89-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-fluorophenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

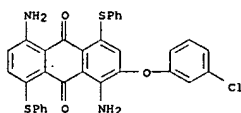


RN 94150-90-0 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-fluorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

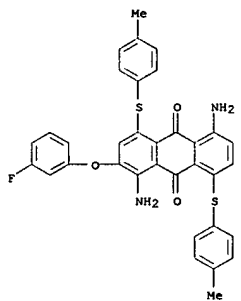


RN 94150-87-5 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-chlorophenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

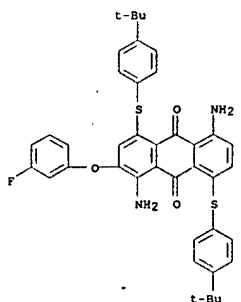


RN 94150-88-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

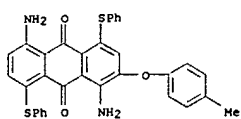


RN 94150-91-1 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

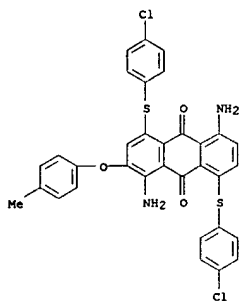


RN 94150-92-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methylphenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

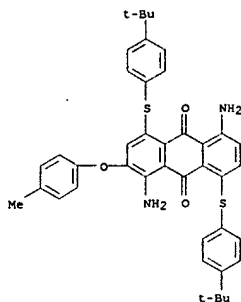


RN 94150-93-3 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)

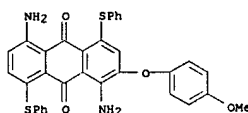


RN 94150-94-4 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

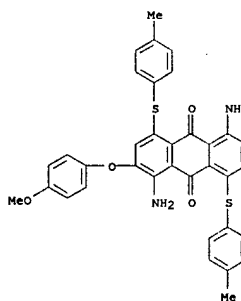


RN 94150-95-5 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methoxyphenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

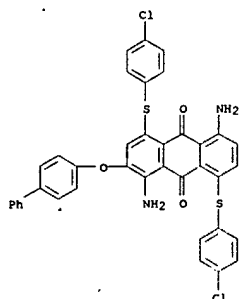


RN 94150-96-6 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methoxyphenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

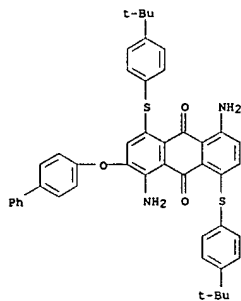


RN 94150-97-7 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-([1,1'-biphenyl]-4-yloxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

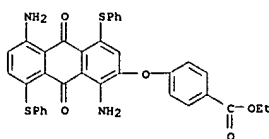


RN 94150-98-8 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-([1,1'-biphenyl]-4-yloxy)-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

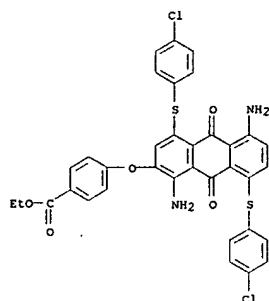


RN 94150-99-9 CAPLUS
CN Benzoic acid, 4-([1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

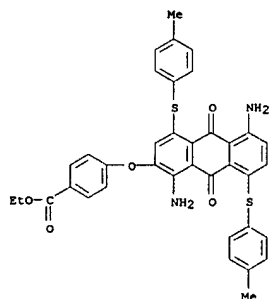


RN 94151-00-3 CAPLUS
CN Benzoic acid, 4-([1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

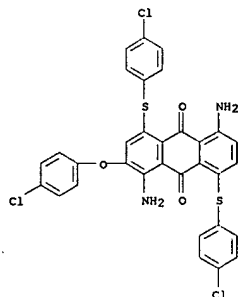


RN 94151-01-6 CAPLUS
CN Benzoic acid, 4-([1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

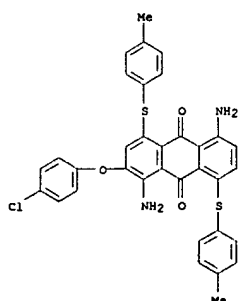


RN 94151-02-7 CAPLUS
CN Benzoic acid, 4-([1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

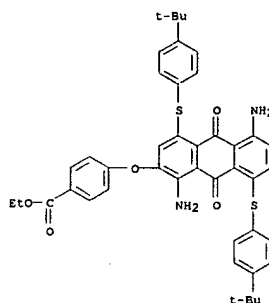


RN 94151-05-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

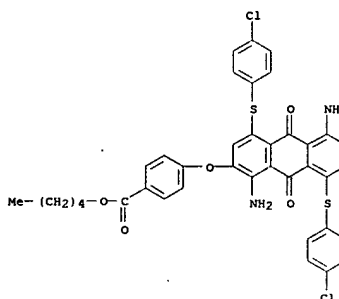


RN 94151-06-1 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
NAME)

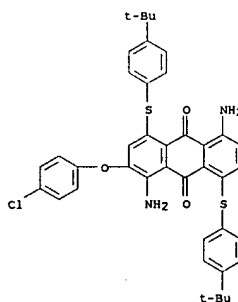


RN 94151-03-8 CAPLUS
CN Benzoic acid, 4-([1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

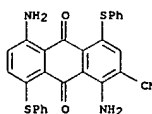


RN 94151-04-9 CAPLUS

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

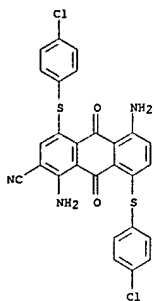


RN 94151-07-2 CAPLUS
CN 2-Anthracenecarbonitrile, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

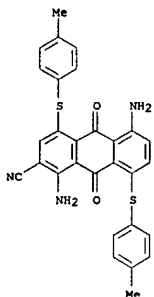


RN 94151-08-3 CAPLUS
CN 2-Anthracenecarbonitrile, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

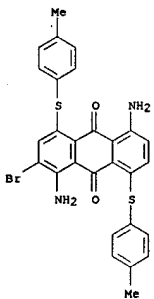


RN 94151-09-4 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo- (9CI) (CA INDEX NAME)

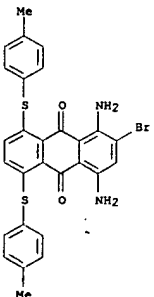


RN 94151-10-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

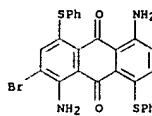


RN 94171-23-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

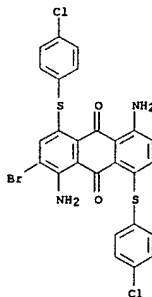


RN 94171-24-1 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

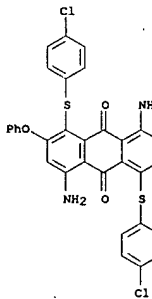


RN 94151-11-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

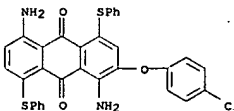


RN 94151-12-9 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

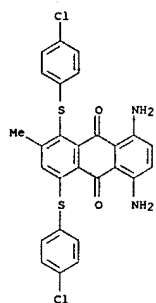


RN 94171-25-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

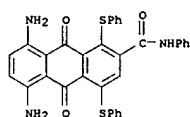


RN 94172-86-8 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

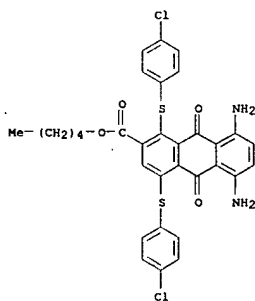


RN 94172-90-4 CAPLUS
CN 2-Anthracenecarboxamide,
5,8-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-1,4-
bis(phenylthio)- (9CI) (CA INDEX NAME)

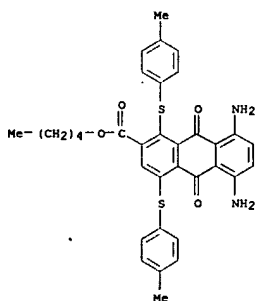


RN 94172-91-5 CAPLUS
CN 2-Anthracenecarboxamide, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-
dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

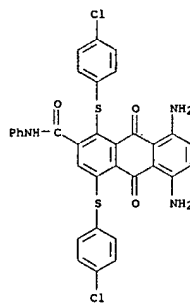


RN 94172-94-8 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-
methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

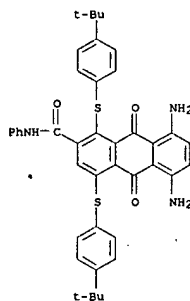


RN 94172-95-9 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-(1,1-
dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI)
(CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

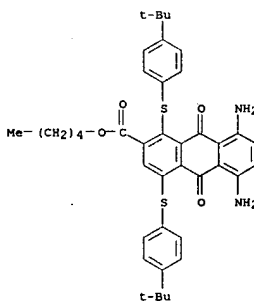


RN 94172-92-6 CAPLUS
CN 2-Anthracenecarboxamide, 5,8-diamino-1,4-bis[(4-(1,1-
dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA
INDEX NAME)

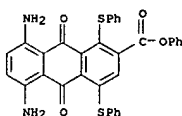


RN 94172-93-7 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

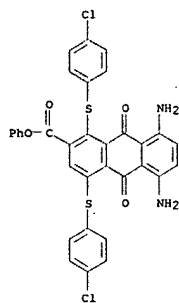


RN 94172-96-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-
bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

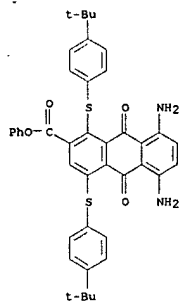


RN 94172-97-1 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-
9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

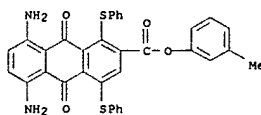


RN 94172-98-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

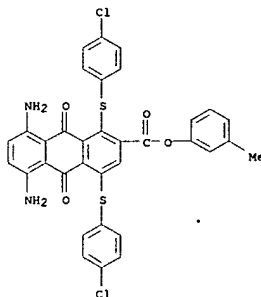


RN 94172-99-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

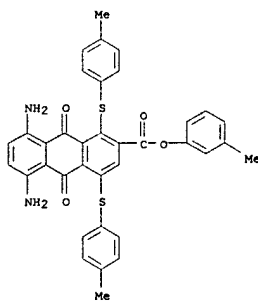


RN 94173-00-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

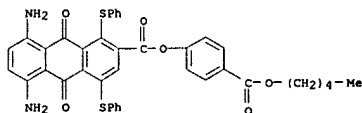


RN 94173-01-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

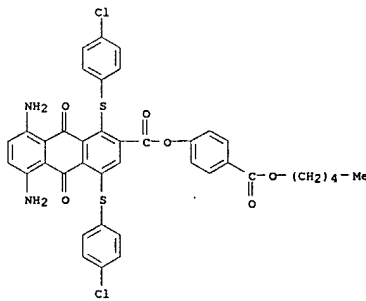


RN 94173-02-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis[(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

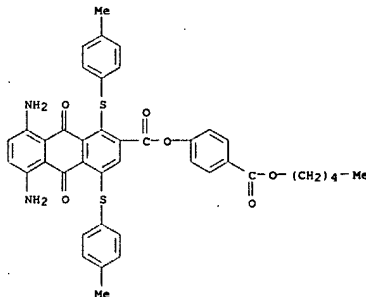


RN 94173-03-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

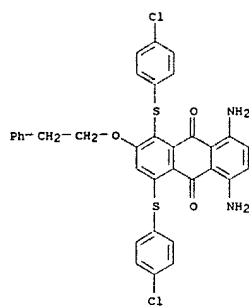


RN 94173-04-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

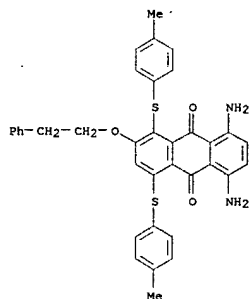


RN 94173-05-4 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

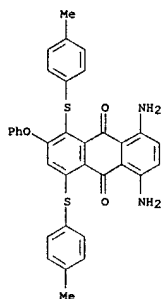


RN 94173-06-5 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-methylphenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

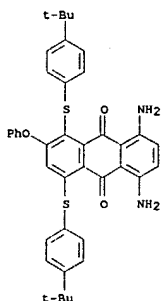


RN 94173-07-6 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
CN 9,10-Anthracenedione,
5,8-diamino-1,4-bis[(4-methylphenyl)thio]-2-phenoxy-
(9CI) (CA INDEX NAME)



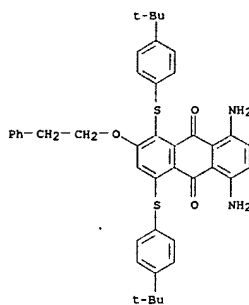
RN 94173-10-1 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)



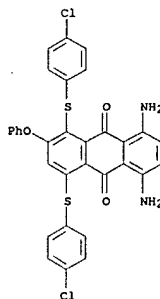
RN 94173-11-2 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-2-(3-fluorophenoxy)-1,4-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

10817271.trn

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

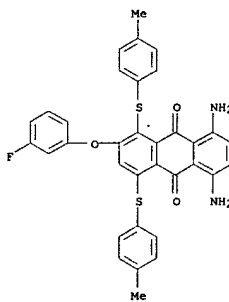


RN 94173-08-7 CAPLUS
CN 9,10-Anthracenedione,
5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-phenoxy-
(9CI) (CA INDEX NAME)

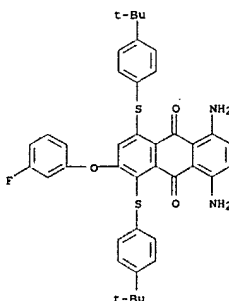


RN 94173-09-8 CAPLUS

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

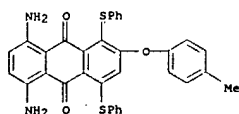


RN 94173-12-3 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

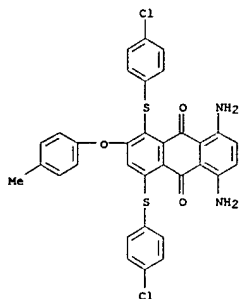


RN 94173-13-4 CAPLUS
CN 9,10-Anthracenedione,
5,8-diamino-2-(4-methylphenylthio)-1,4-bis(phenylthio)-
(9CI) (CA INDEX NAME)

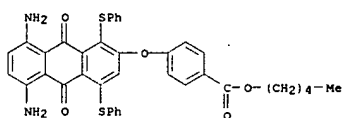
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 94173-14-5 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)



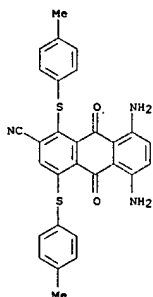
RN 94173-15-6 CAPLUS
 CN Benzoic acid, 4-[[5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis(phenylthio)-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)



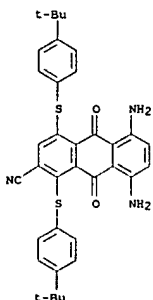
RN 94173-16-7 CAPLUS

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 94173-18-9 CAPLUS
 CN 2-Anthracenecarbonitrile, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo- (9CI) (CA INDEX NAME)



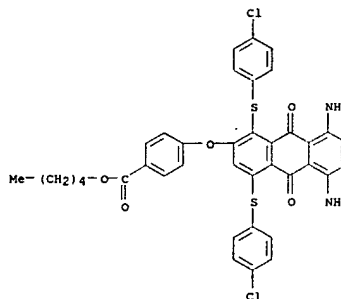
RN 94173-19-0 CAPLUS
 CN 2-Anthracenecarbonitrile, 5,8-diamino-1,4-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)



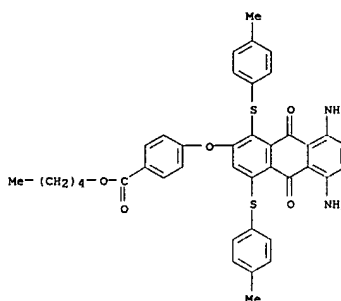
RN 94173-20-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-methyl-5,8-bis(phenylthio)- (9CI)

10817271.trn

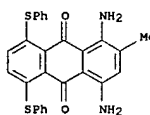
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN Benzoic acid, 4-[[5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)



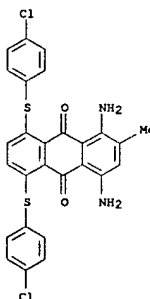
RN 94173-17-8 CAPLUS
 CN Benzoic acid, 4-[[5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 INDEX NAME)

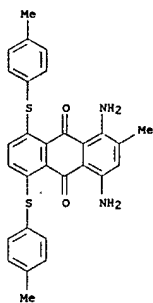


RN 94173-21-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

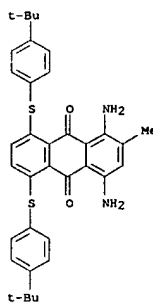


RN 94173-22-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-methyl-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

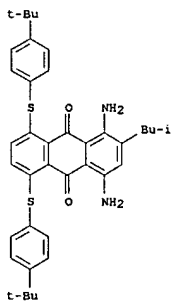


RN 94173-23-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

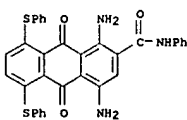


RN 94173-24-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

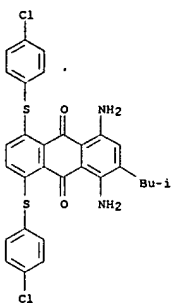


RN 94173-31-6 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

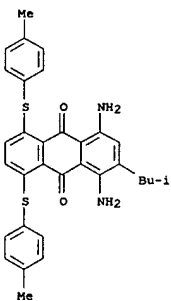


RN 94173-32-7 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

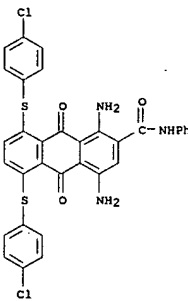


RN 94173-25-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

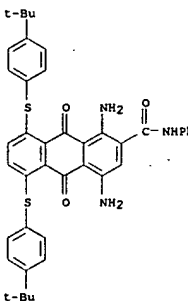


RN 94173-26-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

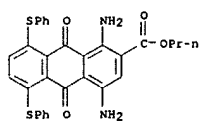


RN 94173-33-8 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

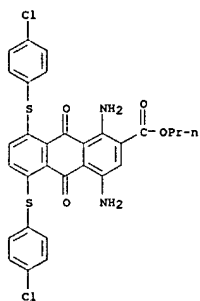


RN 94173-34-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, propyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

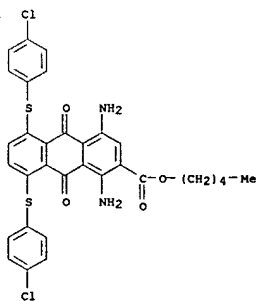


RN 94173-35-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, propyl ester (9CI) (CA INDEX NAME)

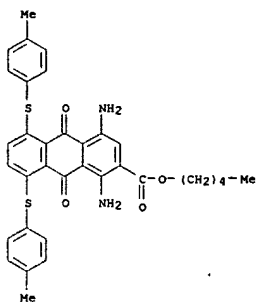


RN 94173-36-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, propyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

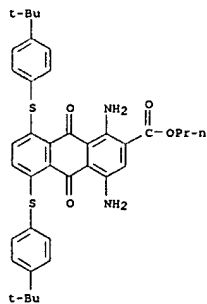


RN 94173-39-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

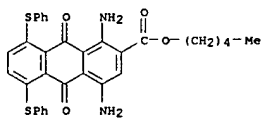


RN 94173-40-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

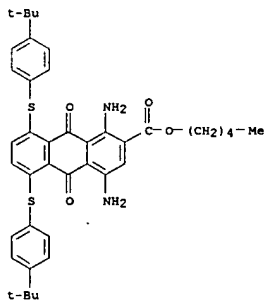


RN 94173-37-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, pentyl ester (9CI) (CA INDEX NAME)

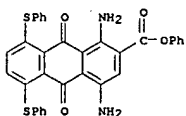


RN 94173-38-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

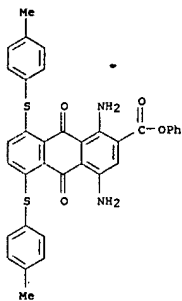


RN 94173-41-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

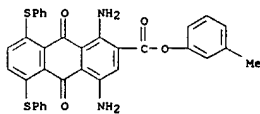


RN 94173-42-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

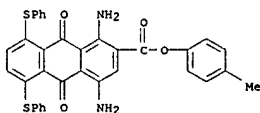


RN 94173-43-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

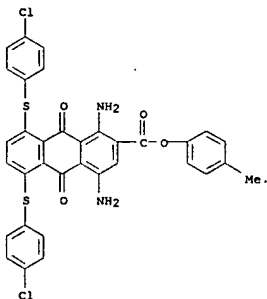


RN 94173-44-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

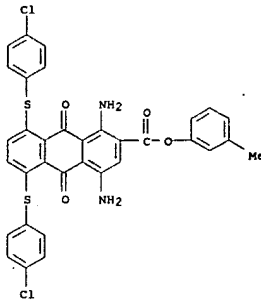


RN 94173-47-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

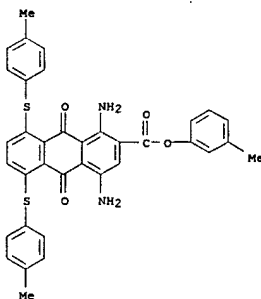


RN 94173-48-5 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-chlorophenyl)thio]-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

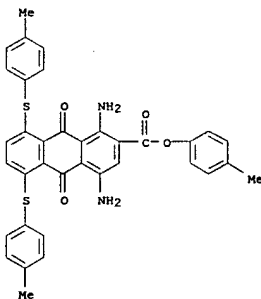


RN 94173-45-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-chlorophenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

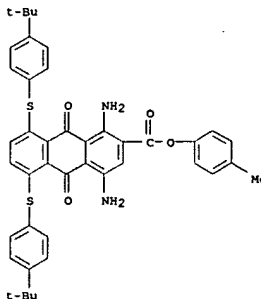


RN 94173-46-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis[(4-methylphenyl)thio]-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

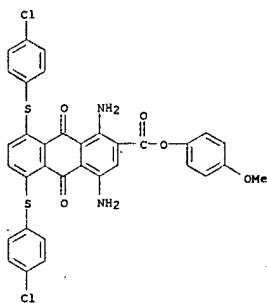


RN 94173-49-6 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

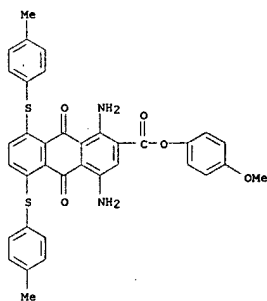


RN 94173-50-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

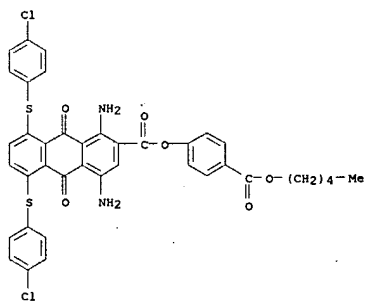


RN 94173-51-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

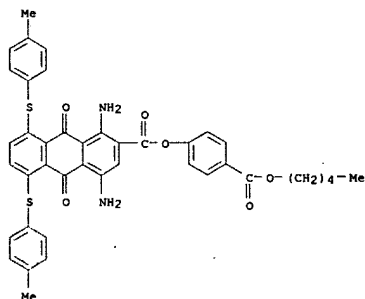


RN 94173-52-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

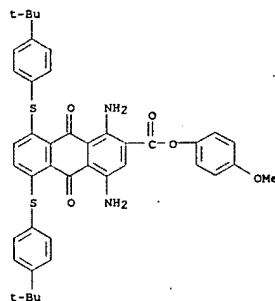


RN 94173-55-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

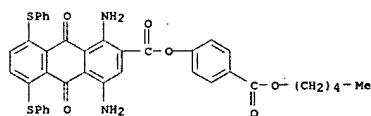


RN 94173-56-5 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 dimethylethyl)phenylthio]-9,10-dihydro-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

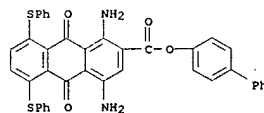


RN 94173-53-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

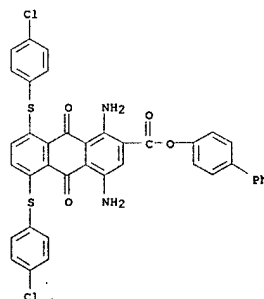


RN 94173-54-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

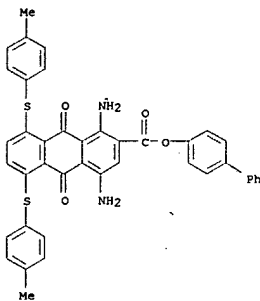


RN 94173-57-6 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

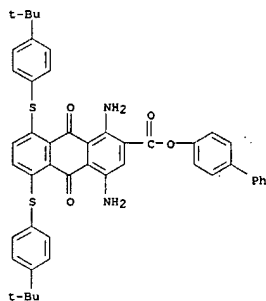


RN 94173-58-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

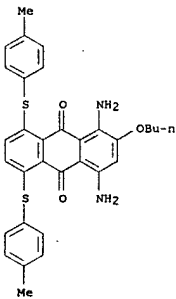


RN 94173-59-8 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

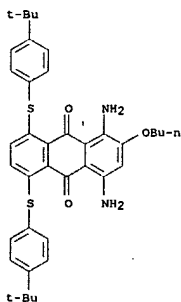


RN 94173-60-1 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

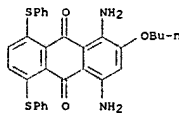


RN 94173-63-4 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

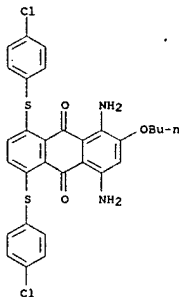


RN 94173-64-5 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-(phenylmethoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued) INDEX NAME)

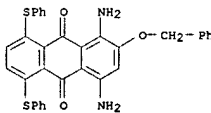


RN 94173-61-2 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

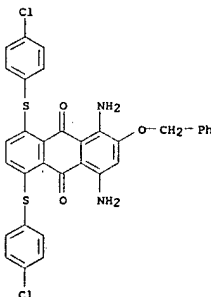


RN 94173-62-3 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

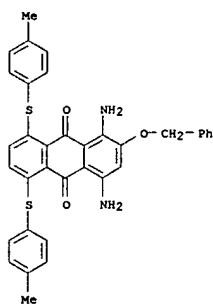


RN 94173-65-6 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

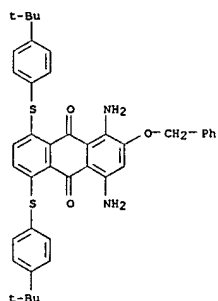


RN 94173-66-7 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

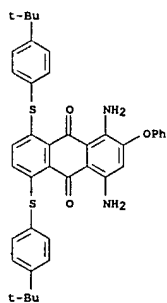


RN 94173-67-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(1,1-dimethylethyl)phenylthio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

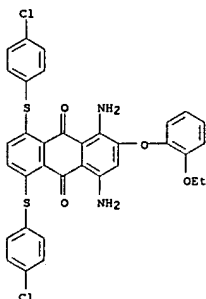


RN 94173-68-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-phenoxy-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

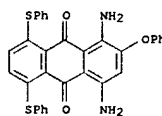


RN 94173-71-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)

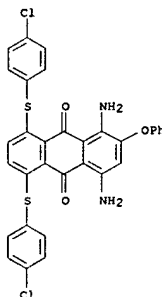


RN 94173-72-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-ethoxyphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

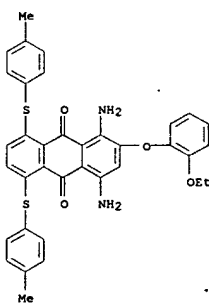


RN 94173-69-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

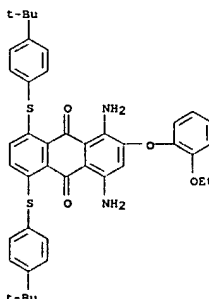


RN 94173-70-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

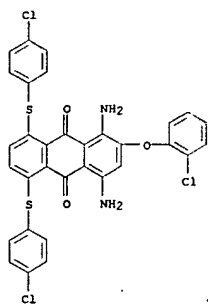


RN 94173-73-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)

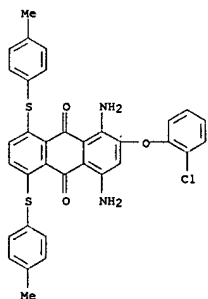


RN 94173-74-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

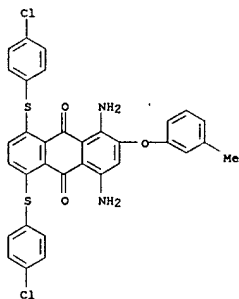


RN 94173-75-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

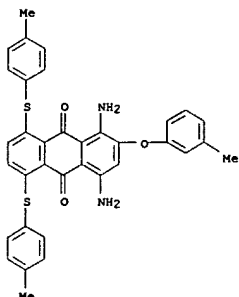


RN 94173-76-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

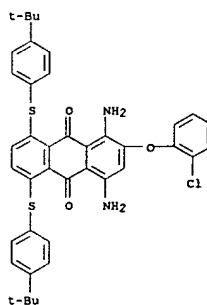


RN 94173-79-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-methylphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

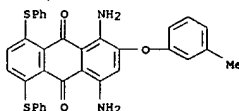


RN 94173-80-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

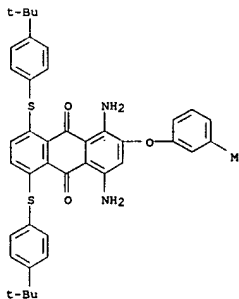


RN 94173-77-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-methylphenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

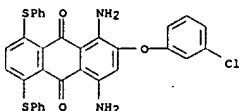


RN 94173-78-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

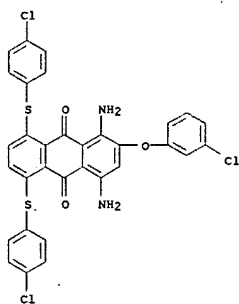


RN 94173-81-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

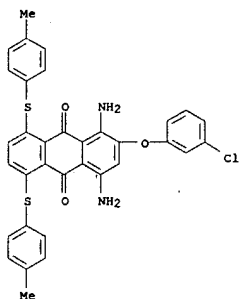


RN 94173-82-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

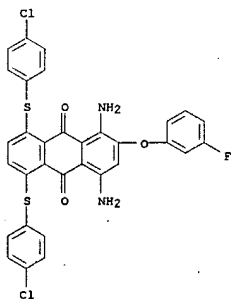


RN 94173-83-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

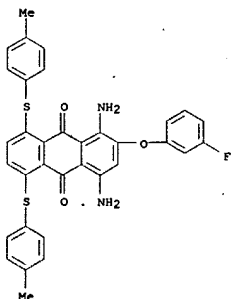


RN 94173-84-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

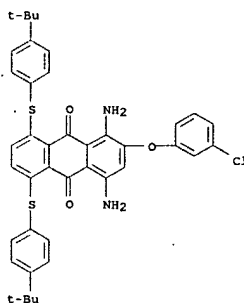


RN 94173-87-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-fluorophenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

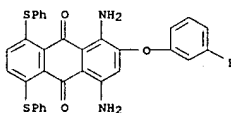


RN 94173-88-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

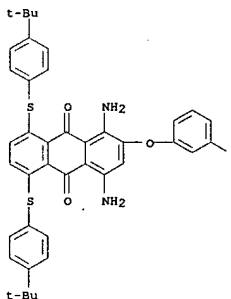


RN 94173-85-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-fluorophenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

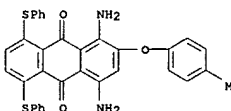


RN 94173-86-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

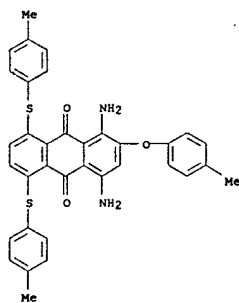


RN 94173-89-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-methylphenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

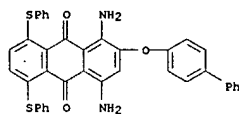


RN 94173-90-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-methylphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

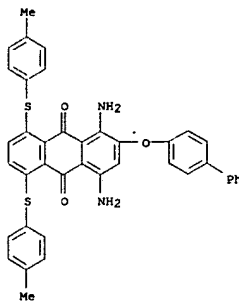


RN 94173-91-8 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-([1,1'-biphenyl]-4-yloxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

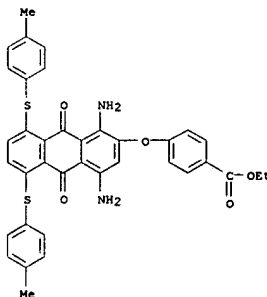


RN 94173-92-9 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-([1,1'-biphenyl]-4-yloxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

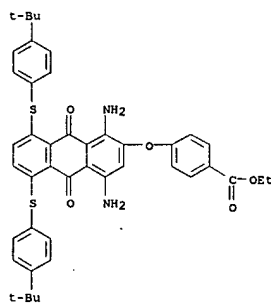


RN 94173-93-0 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

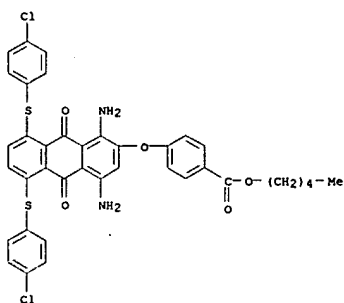


RN 94173-94-1 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

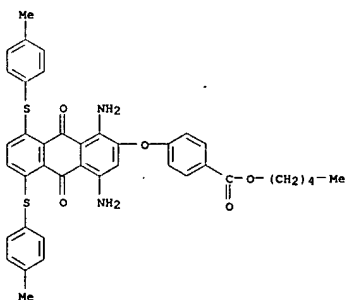


RN 94173-95-2 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

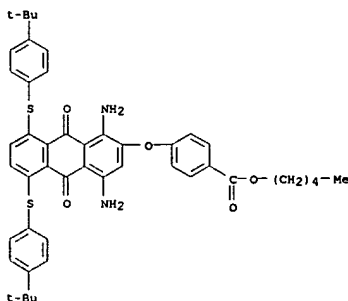


RN 94173-96-3 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

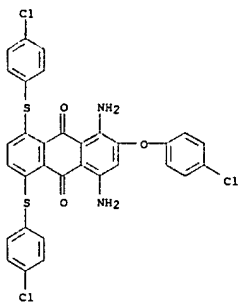


RN 94173-97-4 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

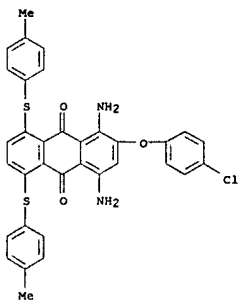


RN 94173-98-5 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-(4-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

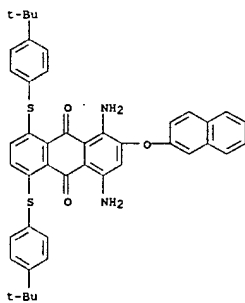
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



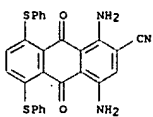
RN 94173-99-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-chlorophenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 94174-00-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-chlorophenoxy)-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

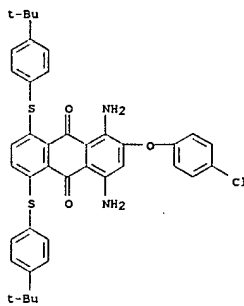
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
dimethylethyl)phenyl]thio]-2-(2-naphthalenyloxy)- (9CI) (CA INDEX NAME)

RN 94174-03-5 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

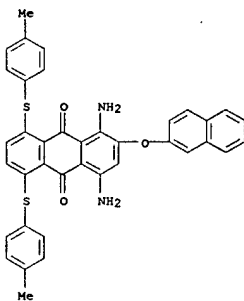


RN 94174-04-6 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

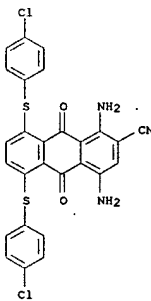


RN 94174-01-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(2-naphthalenyloxy)- (9CI) (CA INDEX NAME)

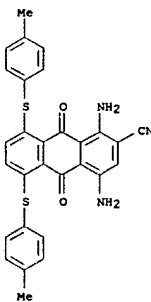


RN 94174-02-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

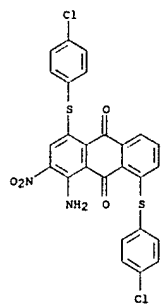


RN 94174-05-7 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo- (9CI) (CA INDEX NAME)

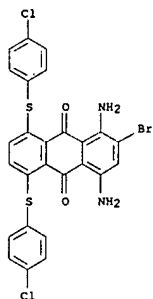


RN 94180-98-0 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-4,8-bis[(4-chlorophenyl)thio]-2-nitro- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

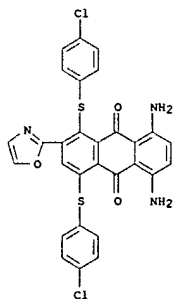


RN 94217-66-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

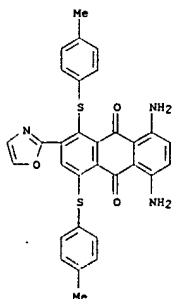


RN 94237-95-3 CAPLUS
 CN Benzoic acid, 4-[[[1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

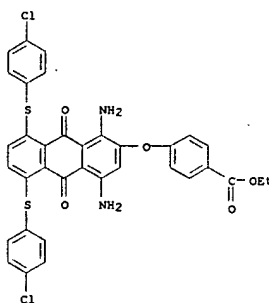


RN 103658-22-6 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-methylphenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

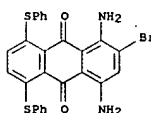


RN 103658-23-7 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

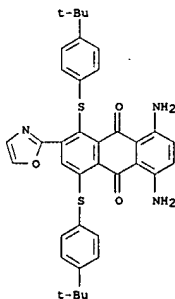


RN 94237-96-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

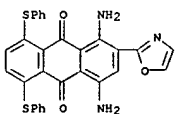


RN 103658-21-5 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

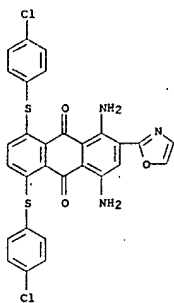


RN 103658-24-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-oxazolyl)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

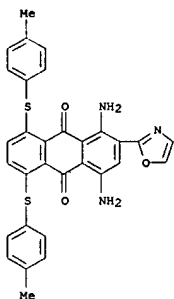


RN 103658-25-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

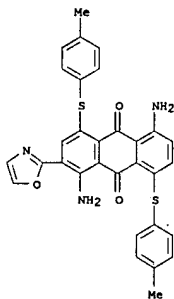


RN 103658-26-0 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

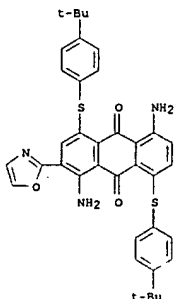


RN 103658-27-1 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
oxazolyl)- (9CI) (CA INDEX NAME)



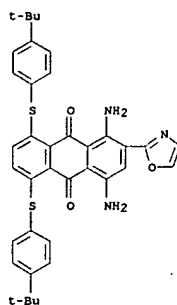
RN 103679-69-2 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)



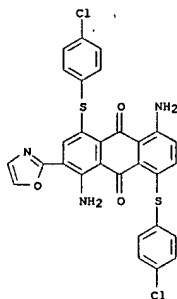
IT 94150-66-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(Preparation of)
RN 94150-66-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-(1,1-

10817271.trn

L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

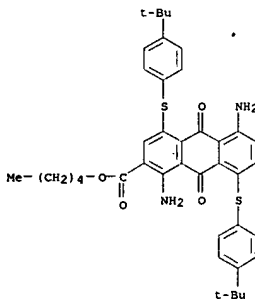


RN 103679-67-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(2-oxazolyl)- (9CI) (CA INDEX NAME)



RN 103679-68-1 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-methylphenyl)thio]-2-(2-

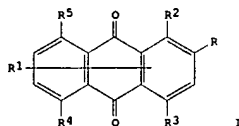
L4 ANSWER 41 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI)
(CA INDEX NAME)



L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1985:47339 CAPLUS
DOCUMENT NUMBER: 102:47339
TITLE: Anthraquinone dyes and their use in dichroic material
INVENTOR(S): Blunck, Martin; Claussen, Uwe; Kroeck, Friedrich
Wihelm; Neeff, Ruetger
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 84 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3244815	A1	19840607	DE 1982-3244815	19821203
EP 111197	A2	19840620	EP 1983-111602	19831121
EP 111197	A3	19861126		
EP 111197	B1	19891108		
R: CH, DE, GB, LI				
JP 59109559	A2	19840625	JP 1983-224611	19831130
JP 04006223	B4	19920205		
US 4596666	A	19860624	US 1983-557680	19831202
PRIORITY APPL. INFO.:			DE 1982-3244815	A 19821203

GI



AB Yellow to blue dyes of general structure I are described, where R = alkyl, aralkyl, carboxylic ester, thiocarboxylic ester, carbamoyl, aryl, alkoxy, CN, etc.; R1 = H or R; R2-R5 = H, NH2, OH, halogen, or NO2 and at least one arylthio. I, which are prepared by known methods, have good light fastness and high order parameter (S) and are especially useful as dyes in liquid crystal comps. for guest-host electrooptical display devices. Thus, reaction of 1-amino-4-bromo-2-methylantraquinone (81-50-5) with 4-Me3CC6H4SH [2396-68-1] in DMF at 125-130° in the presence of K2CO3 gave bluish red I (R = Me, R1 = R4 = R5 = H, R2 = NH2, R3 = 4-Me3CC6H4S) [94176-30-4] which showed an S value of 0.69 at 0.5% concentration

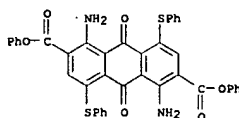
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

94173-44-1 94173-45-2 94173-46-3
94173-47-4 94173-48-5 94173-49-6
94173-50-9 94173-51-0 94173-52-1
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94173-59-8 94173-60-1 94173-61-2
94173-62-3 94173-63-4 94173-64-5
94173-65-6 94173-66-7 94173-67-8
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94173-87-2 94173-88-3 94173-89-4
94173-90-7 94173-91-8 94173-92-9
94173-93-0 94173-94-1 94173-95-2
94173-96-3 94173-97-4 94173-98-5
94173-99-6 94174-00-2 94174-01-3
94174-02-4 94174-03-5 94174-04-6
94174-05-7 94180-98-0 94217-66-0
94237-95-3 94237-96-4

RL: DEV (Device component use); PRP (Properties); USES (Uses)
(dye, for liq.-crystal electrooptical displays, order parameter of)

RN 94150-14-8 CAPLUS

CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, diphenyl ester (9CI) (CA INDEX NAME)



RN 94150-15-9 CAPLUS

CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
in a liq. cryst. mixt. of substituted cyclohexanes. The prepn. and S values of numerous other I are given.

IT

94150-14-8 94150-15-9 94150-16-0

94150-17-1 94150-18-2 94150-19-3

94150-20-6 94150-21-7 94150-22-8

94150-23-9 94150-24-0 94150-25-1

94150-26-2 94150-27-3 94150-28-4

94150-29-5 94150-30-8 94150-31-9

94150-32-1 94150-34-2 94150-35-3

94150-36-4 94150-37-5 94150-38-6

94150-39-7 94150-40-0 94150-41-1

94150-42-2 94150-43-3 94150-44-4

94150-45-5 94150-46-6 94150-47-7

94150-48-8 94150-49-9 94150-50-2

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94150-60-4 94150-61-5 94150-62-6

94150-63-7 94150-64-8 94150-65-9

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94150-78-4 94150-79-5 94150-80-8

94150-81-9 94150-82-0 94150-83-1

94150-84-2 94150-85-3 94150-86-4

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94150-96-6 94150-97-7 94150-98-8

94150-99-9 94151-00-5 94151-01-6

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94151-08-3 94151-09-4 94151-10-7

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94171-24-1 94171-25-2 94172-86-8

94172-87-9 94172-88-0 94172-89-1

94172-90-4 94172-91-5 94172-92-6

94172-93-7 94172-94-8 94172-95-9

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94172-99-3 94173-00-9 94173-01-0

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94173-08-7 94173-09-8 94173-10-1

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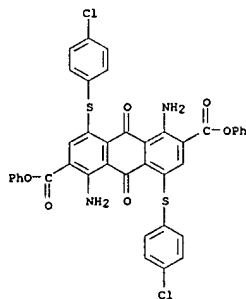
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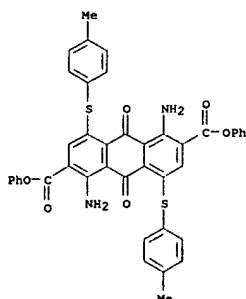
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L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 94150-16-0 CAPLUS

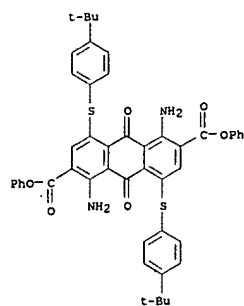
CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)



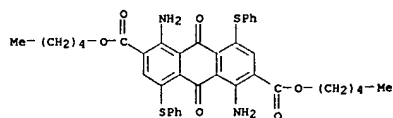
RN 94150-17-1 CAPLUS

CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, diphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

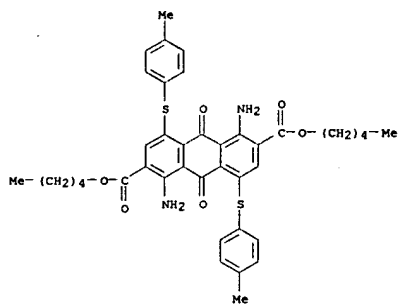


RN 94150-18-2 CAPLUS
CN 2,6-Anthracenedicarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, dipentyl ester (9CI) (CA INDEX NAME)

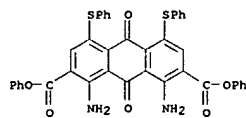


RN 94150-19-3 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-, dipentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

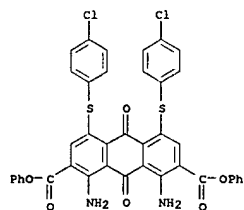


RN 94150-20-6 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-9,10-dioxo-4,5-bis(phenylthio)-, diphenyl ester (9CI) (CA INDEX NAME)

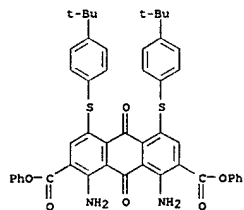


RN 94150-21-7 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

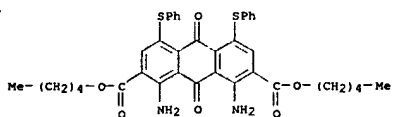
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 94150-22-8 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

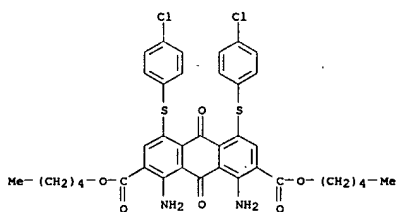


RN 94150-23-9 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-9,10-dioxo-4,5-bis(phenylthio)-, dipentyl ester (9CI) (CA INDEX NAME)

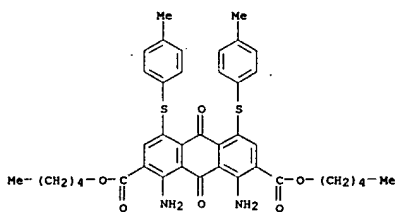


RN 94150-24-0 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-4,5-bis[(4-chlorophenyl)thio]-

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

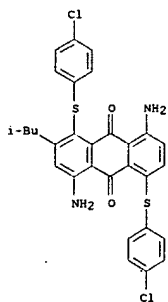


RN 94150-25-1 CAPLUS
CN 2,7-Anthracenedicarboxylic acid, 1,8-diamino-9,10-dihydro-4,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, dipentyl ester (9CI) (CA INDEX NAME)

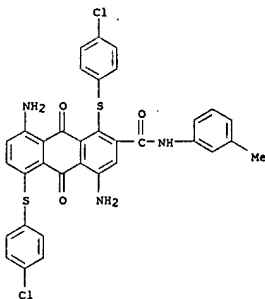


RN 94150-26-2 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

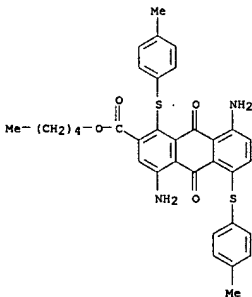


RN 94150-27-3 CAPLUS
 CN 2-Anthracenecarboxamide, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-N-(3-methylphenyl)-9,10-dioxo- (9CI) (CA INDEX NAME)

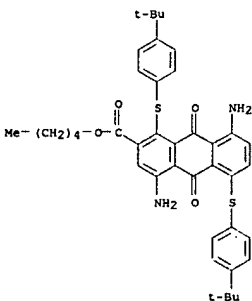


RN 94150-28-4 CAPLUS
 CN 2-Anthracenecarboxamide, 4,8-diamino-1,5-bis[(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-N-(3-methylphenyl)-9,10-dioxo-

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

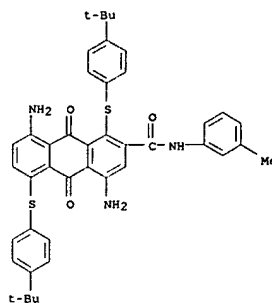


RN 94150-31-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

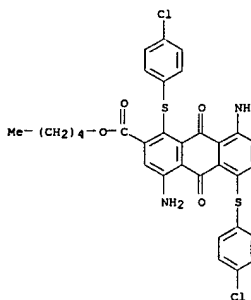


RN 94150-33-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 (9CI) (CA INDEX NAME)

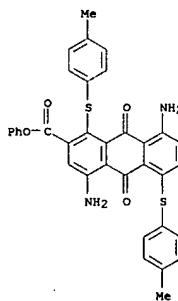


RN 94150-29-5 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

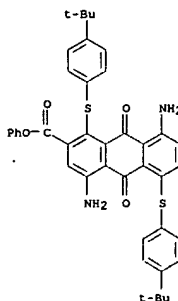


RN 94150-30-8 CAPLUS

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

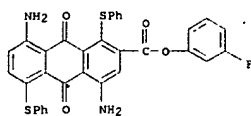


RN 94150-34-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

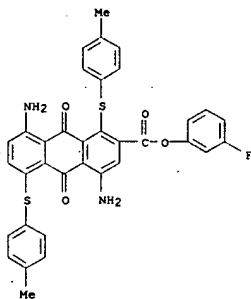


RN 94150-35-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

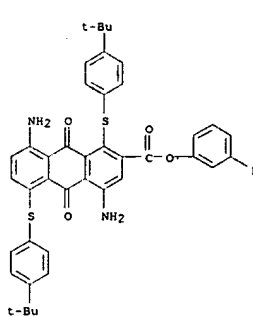


RN 94150-36-4 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

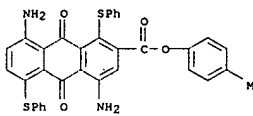


RN 94150-37-5 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, 3-fluorophenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

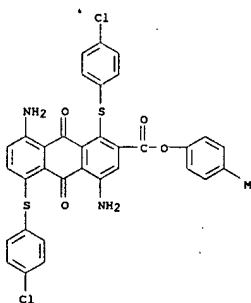


RN 94150-38-6 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

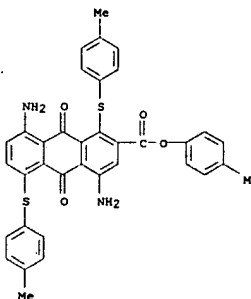


RN 94150-39-7 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

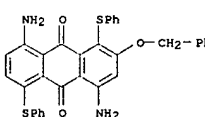


RN 94150-40-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

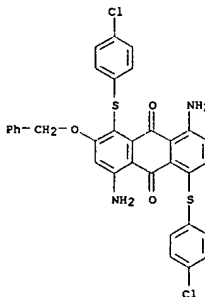


RN 94150-41-1 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-2-(phenylmethoxy)-1,5-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

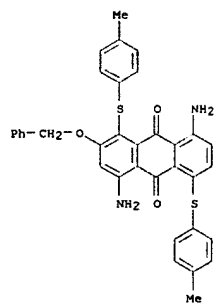


RN 94150-42-2 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

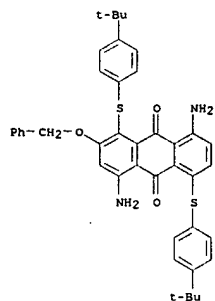


RN 94150-43-3 CAPLUS
CN 9,10-Anthracenedione, 4,8-diamino-9,10-dihydro-1,5-bis[(4-methylphenyl)thio]-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

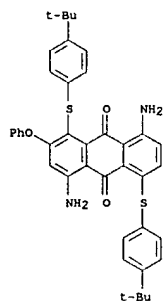


RN 94150-44-4 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[4-(1,1-dimethylethyl)phenylthio]-9,10-dihydro-9,10-dioxo-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

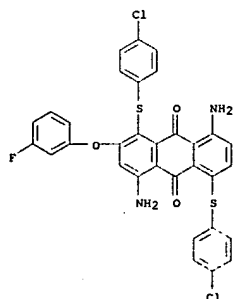


RN 94150-45-5 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-2-phenoxy-1,5-bis(phenylthio)- (9CI)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

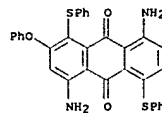


RN 94150-48-8 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[4-(1,1-dimethylethyl)phenylthio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

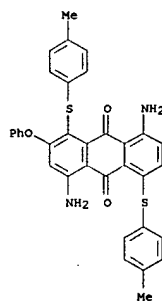


RN 94150-49-9 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-2-([1,1'-biphenyl]-4-yloxy)-1,5-bis[4-(1,1-dimethylethyl)phenylthio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

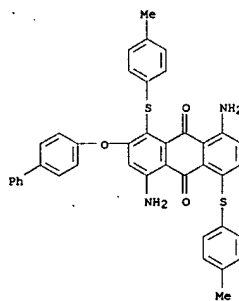


RN 94150-46-6 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[4-(1,1-dimethylethyl)phenylthio]-2-phenoxy- (9CI) (CA INDEX NAME)

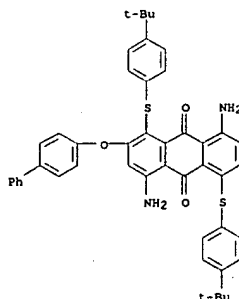


RN 94150-47-7 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[4-(1,1-dimethylethyl)phenylthio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

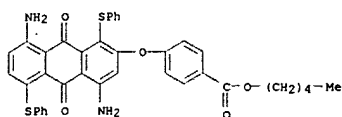


RN 94150-50-2 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-2-([1,1'-biphenyl]-4-yloxy)-1,5-bis[4-(1,1-dimethylethyl)phenylthio]- (9CI) (CA INDEX NAME)

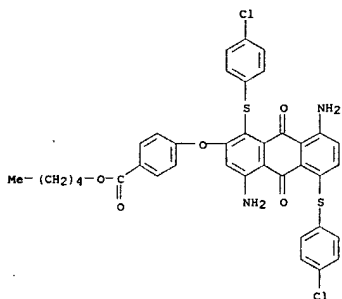


RN 94150-51-3 CAPLUS
 CN Benzoic acid, 4-[[4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

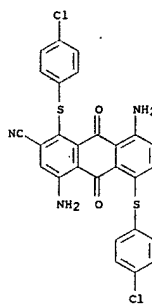


RN 94150-52-4 CAPLUS
 CN Benzoic acid, 4-[[[4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

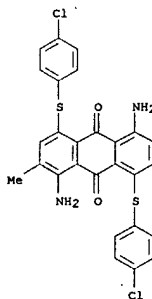


RN 94150-53-5 CAPLUS
 CN 2-Anthracenecarbonitrile, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

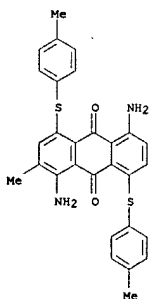


RN 94150-54-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

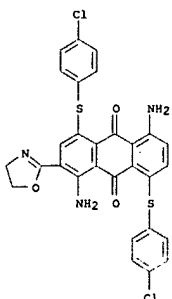


RN 94150-55-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-methyl-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

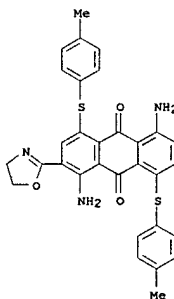


RN 94150-56-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(4,5-dihydro-2-oxazolyl)- (9CI) (CA INDEX NAME)

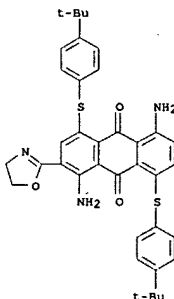


RN 94150-57-9 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

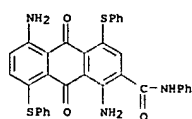


RN 94150-58-0 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4,5-dihydro-2-oxazolyl)-4,8-bis[(1,1-dimethylethyl)phenyl]thio]- (9CI) (CA INDEX NAME)

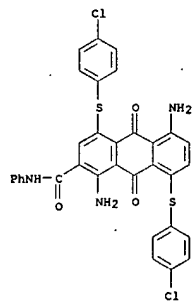


RN 94150-59-1 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

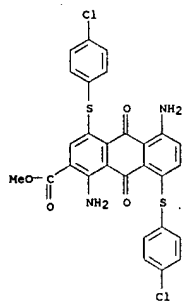


RN 94150-60-4 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

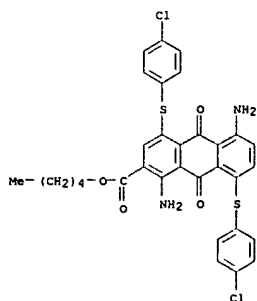


RN 94150-61-5 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

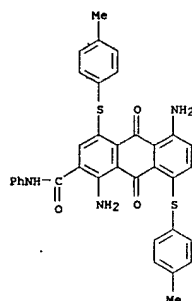


RN 94150-64-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

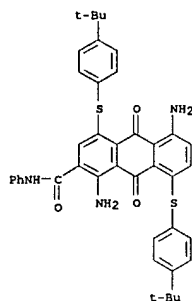


RN 94150-65-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

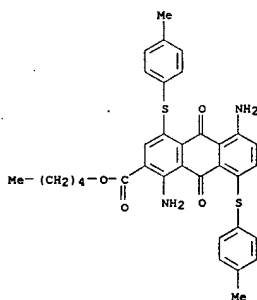


RN 94150-62-6 CAPLUS
 CN 2-Anthracenecarboxamide, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

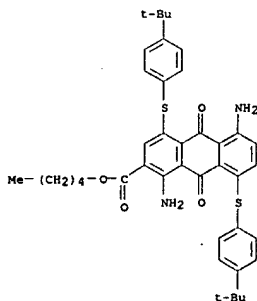


RN 94150-63-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

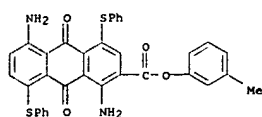


RN 94150-66-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

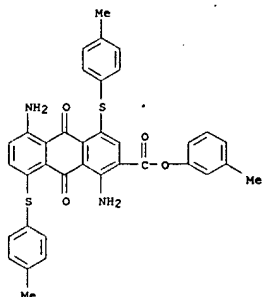


RN 94150-67-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis[(4-methylphenyl)thio]-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

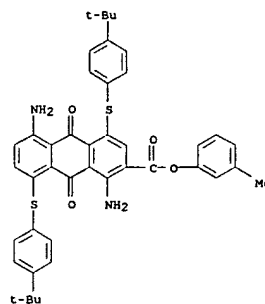


RN 94150-68-2 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

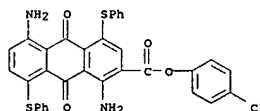


RN 94150-69-3 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

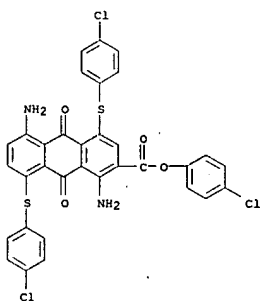


RN 94150-70-6 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, 4-chlorophenyl ester (9CI) (CA INDEX NAME)

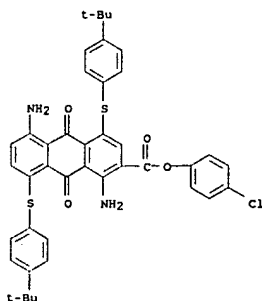


RN 94150-71-7 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-chlorophenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

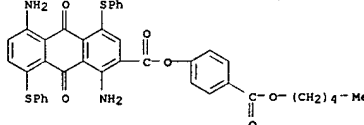


RN 94150-72-8 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 4-chlorophenyl ester (9CI) (CA INDEX NAME)

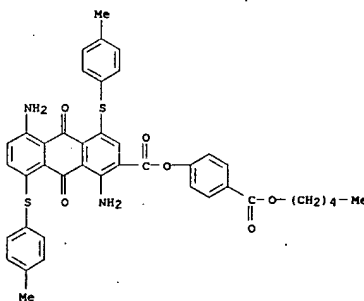


RN 94150-73-9 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

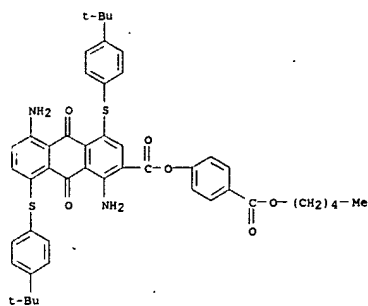


RN 94150-74-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

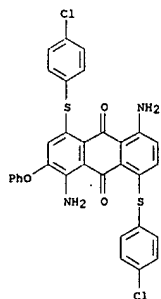


RN 94150-75-1 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,5-diamino-4,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

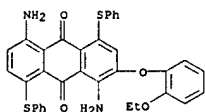


RN 94150-76-2 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-phenoxy-
(9CI) (CA INDEX NAME)

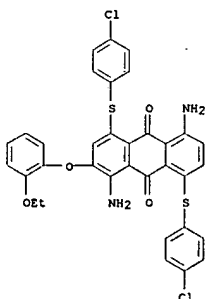


RN 94150-77-3 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-4,8-bis[(4-methylphenyl)thio]-2-phenoxy-
(9CI) (CA INDEX NAME)

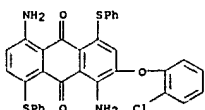
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
CN 9,10-Anthracenedione,
1,5-diamino-2-(2-ethoxyphenoxy)-4,8-bis(phenylthio)-
(9CI) (CA INDEX NAME)



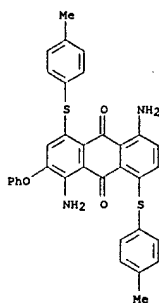
RN 94150-80-8 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)



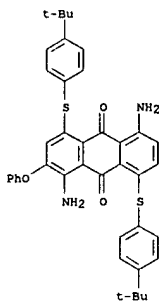
RN 94150-81-9 CAPLUS
CN 9,10-Anthracenedione,
1,5-diamino-2-(2-chlorophenoxy)-4,8-bis(phenylthio)-
(9CI) (CA INDEX NAME)



10817271.trn

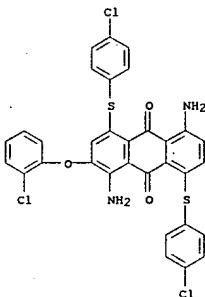
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
(9CI) (CA INDEX NAME)

RN 94150-78-4 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

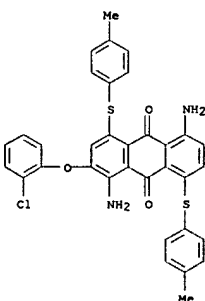


RN 94150-79-5 CAPLUS

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
RN 94150-82-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(2-chlorophenoxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

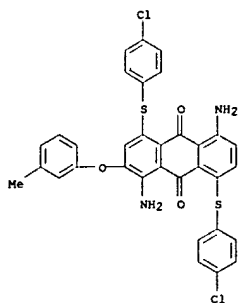


RN 94150-83-1 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-2-(2-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

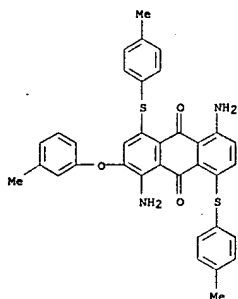


RN 94150-84-2 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

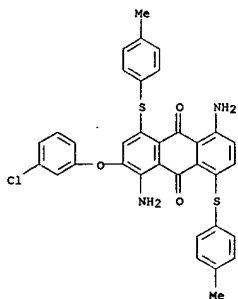


RN 94150-85-3 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-methylphenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

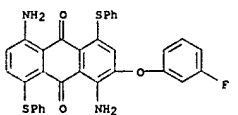


RN 94150-86-4 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

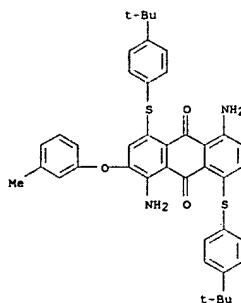
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



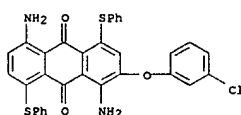
RN 94150-89-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-fluorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 94150-90-0 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-fluorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

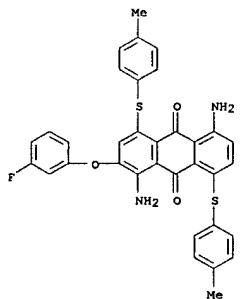
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 dimethylethyl)phenyl]thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

RN 94150-87-5 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-chlorophenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

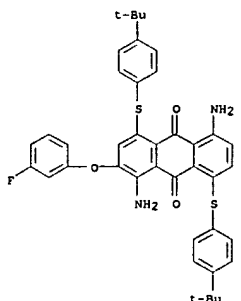


RN 94150-88-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(3-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

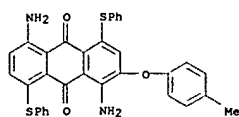


RN 94150-91-1 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

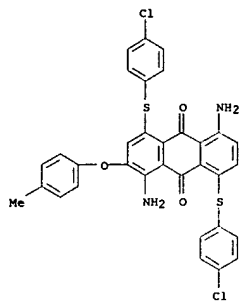


RN 94150-92-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methylphenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

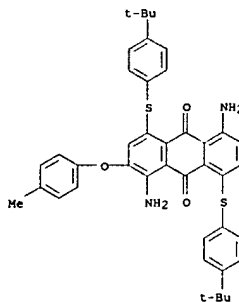


RN 94150-93-3 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)

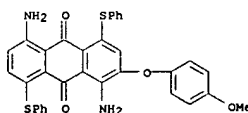


RN 94150-94-4 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

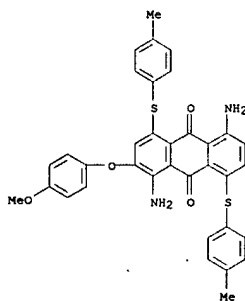


RN 94150-95-5 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methoxyphenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

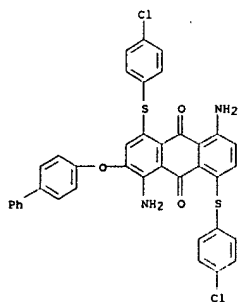


RN 94150-96-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-methoxyphenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

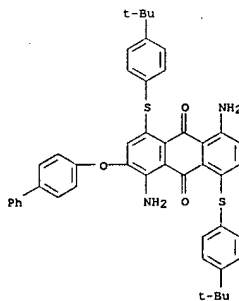


RN 94150-97-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-([1,1'-biphenyl]-4-yloxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

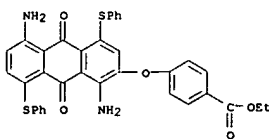


RN 94150-98-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-([1,1'-biphenyl]-4-yloxy)-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

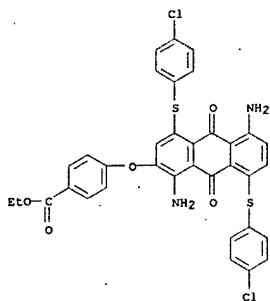


RN 94150-99-9 CAPLUS
 CN Benzoic acid, 4-([1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

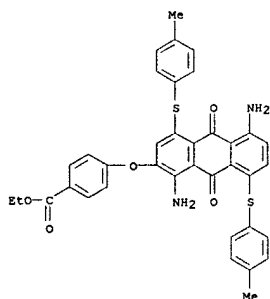


RN 94151-00-5 CAPLUS
 CN Benzoic acid, 4-([1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

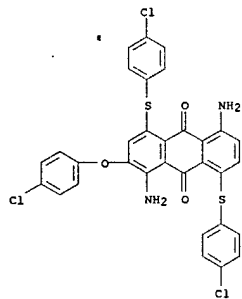


RN 94151-01-6 CAPLUS
 CN Benzoic acid, 4-[[1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

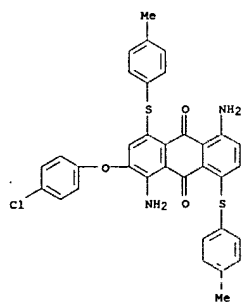


RN 94151-02-7 CAPLUS
 CN Benzoic acid, 4-[[1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

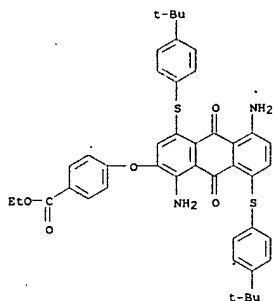


RN 94151-05-0 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

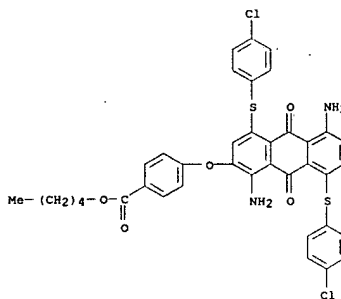


RN 94151-06-1 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

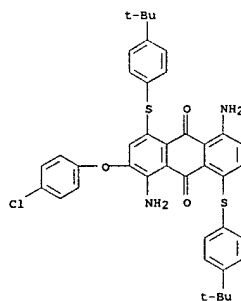


RN 94151-03-8 CAPLUS
 CN Benzoic acid, 4-[[1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

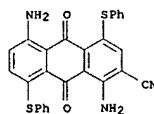


RN 94151-04-9 CAPLUS

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

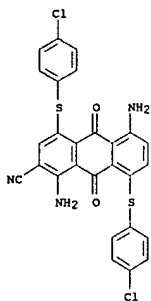


RN 94151-07-2 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,5-diamino-9,10-dihydro-9,10-dioxo-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

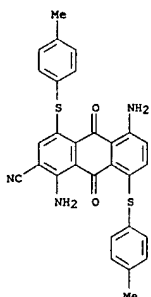


RN 94151-08-3 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

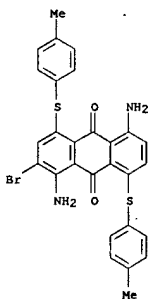


RN 94151-09-4 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,5-diamino-9,10-dihydro-4,8-bis[(4-methylphenyl)thio]-9,10-dioxo- (9CI) (CA INDEX NAME)

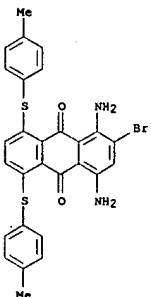


RN 94151-10-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

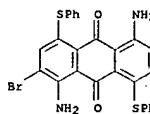


RN 94171-23-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

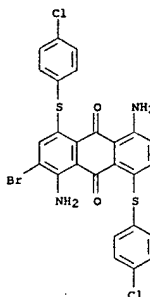


RN 94171-24-1 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-bis[(4-chlorophenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

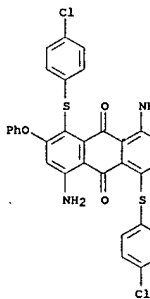


RN 94151-11-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

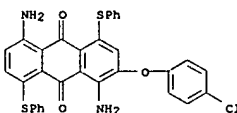


RN 94151-12-9 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-bromo-4,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

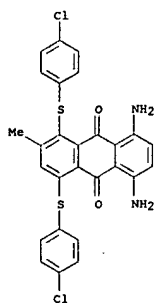


RN 94171-25-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-2-(4-chlorophenoxy)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

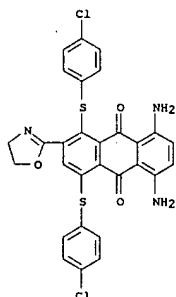


RN 94172-66-8 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

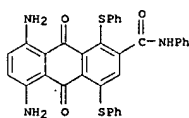


RN 94172-87-9 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(4,5-dihydro-2-oxazolyl)- (9CI) (CA INDEX NAME)

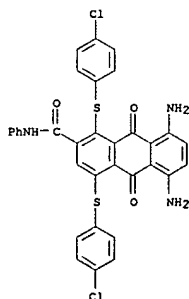


RN 94172-88-0 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-2-(4,5-dihydro-2-oxazolyl)-1,4-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

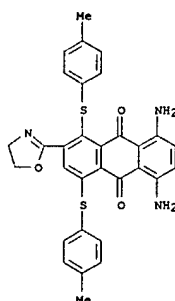


RN 94172-91-5 CAPLUS
CN 2-Anthracenecarboxamide, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

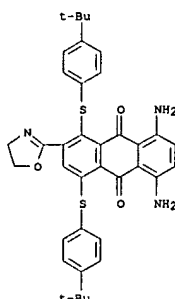


RN 94172-92-6 CAPLUS
CN 2-Anthracenecarboxamide, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

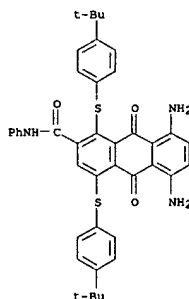


RN 94172-89-1 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-2-(4,5-dihydro-2-oxazolyl)-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

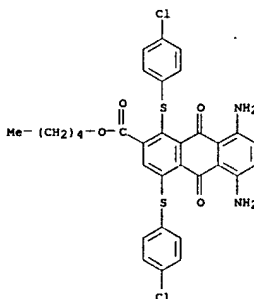


RN 94172-90-4 CAPLUS
CN 2-Anthracenecarboxamide, 5,8-diamino-9,10-dihydro-9,10-dioxo-N-phenyl-1,4-bis[(4-(tert-butyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

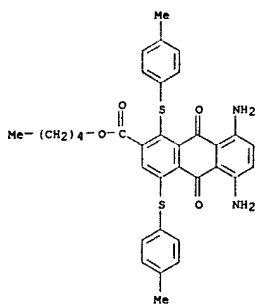


RN 94172-93-7 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

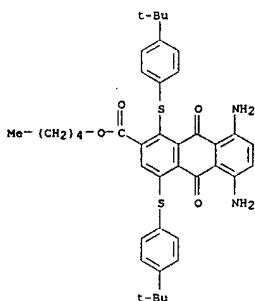


RN 94172-94-8 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

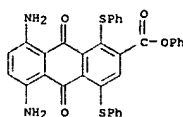
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



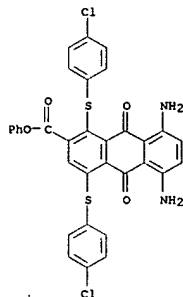
RN 94172-95-9 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)



RN 94172-96-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-

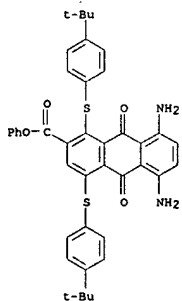
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

RN 94172-97-1 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

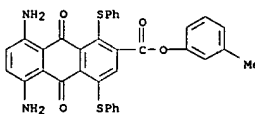


RN 94172-98-2 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

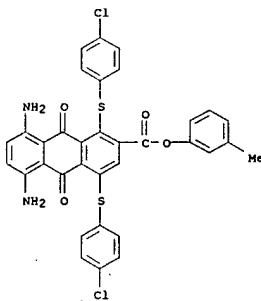


RN 94172-99-3 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis(phenylthio)-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

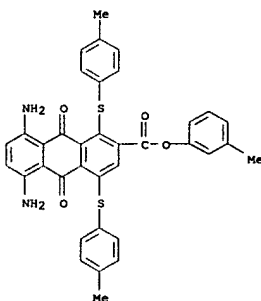


RN 94173-00-9 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

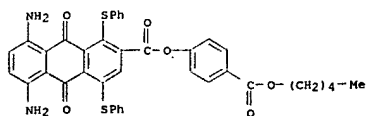


RN 94173-01-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

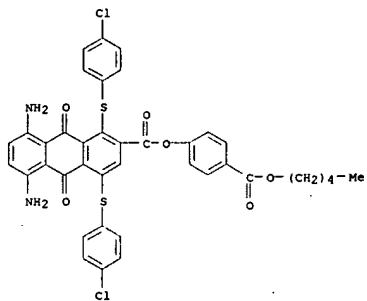


RN 94173-02-1 CAPLUS
CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

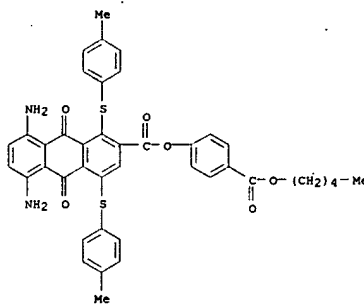


RN 94173-03-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

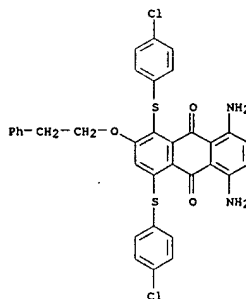


RN 94173-04-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

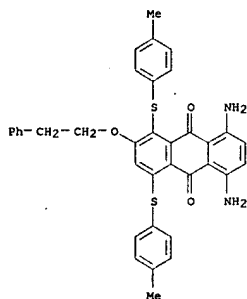


RN 94173-05-4 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

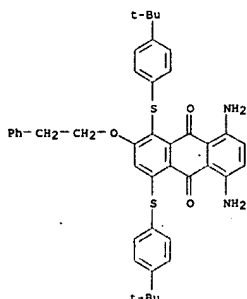


RN 94173-06-5 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-methylphenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

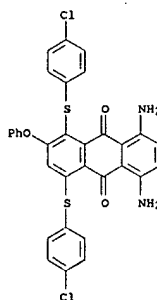


RN 94173-07-6 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-phenylethoxy)- (9CI) (CA INDEX NAME)

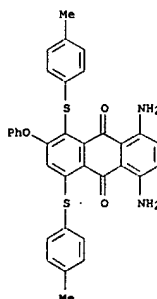


RN 94173-08-7 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

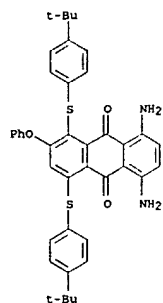


RN 94173-09-8 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-methylphenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

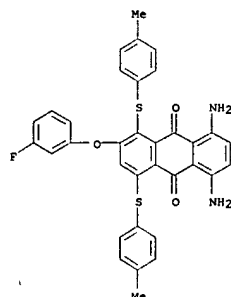


RN 94173-10-1 CAPLUS
 CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

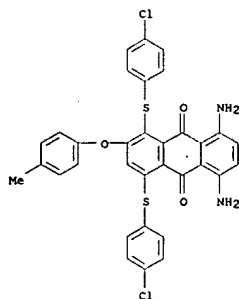


RN 94173-11-2 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-2-(3-fluorophenoxy)-1,4-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

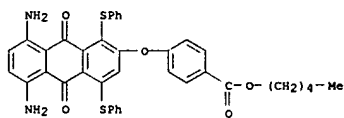


RN 94173-12-3 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

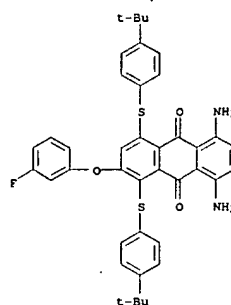


RN 94173-15-6 CAPLUS
CN Benzoic acid, 4-[[5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis(phenylthio)-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

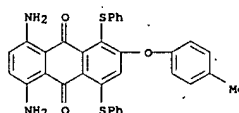


RN 94173-16-7 CAPLUS
CN Benzoic acid, 4-[[5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-bis[(4-chlorophenyl)thio]-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

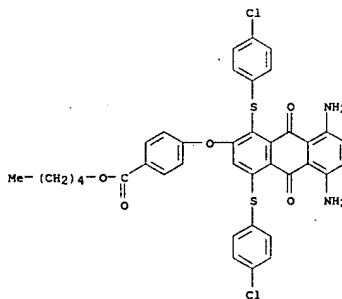


RN 94173-13-4 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-2-(4-methylphenoxy)-1,4-bis(phenylthio)- (9CI) (CA INDEX NAME)

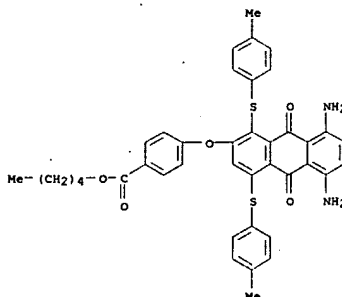


RN 94173-14-5 CAPLUS
CN 9,10-Anthracenedione, 5,8-diamino-1,4-bis[(4-chlorophenyl)thio]-2-(4-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

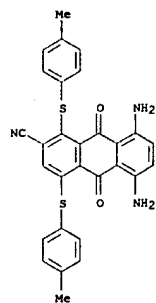


RN 94173-17-8 CAPLUS
CN Benzoic acid, 4-[[5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy]-, pentyl ester (9CI) (CA INDEX NAME)

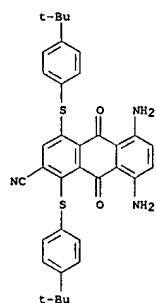


RN 94173-18-9 CAPLUS
CN 2-Anthracenecarbonitrile, 5,8-diamino-9,10-dihydro-1,4-bis[(4-methylphenyl)thio]-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

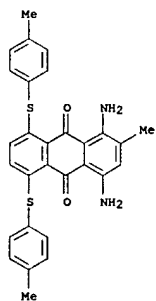


RN 94173-19-0 CAPLUS
 CN 2-Anthracenecarbonitrile, 5,8-diamino-1,4-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

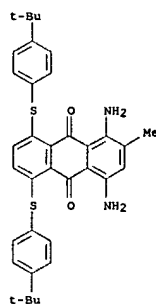


RN 94173-20-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-methyl-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

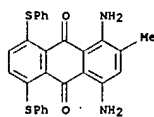


RN 94173-23-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

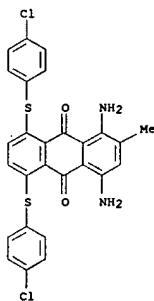


RN 94173-24-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

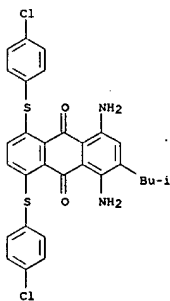


RN 94173-21-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-methyl- (9CI) (CA INDEX NAME)

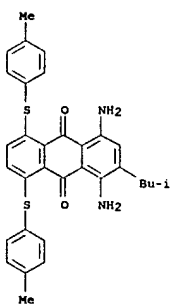


RN 94173-22-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-methyl-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

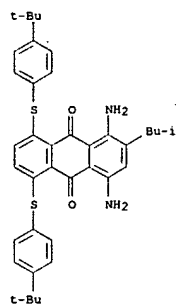


RN 94173-25-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

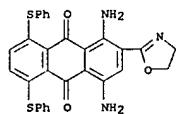


RN 94173-26-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-methylpropyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

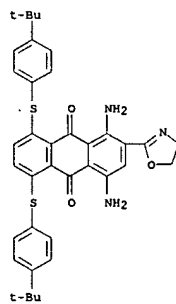


RN 94173-27-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-((4,5-dihydro-2-oxazolyl)-5,8-bis(phenylthio))- (9CI) (CA INDEX NAME)

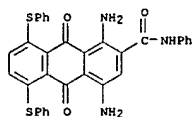


RN 94173-28-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis((4-chlorophenyl)thio)-2-((4,5-dihydro-2-oxazolyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

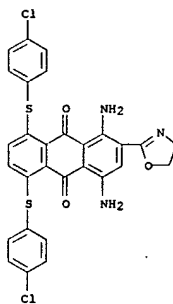


RN 94173-31-6 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-9,10-dioxo-N-phenyl-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

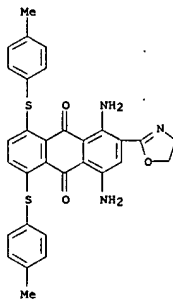


RN 94173-32-7 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-5,8-bis((4-chlorophenyl)thio)-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

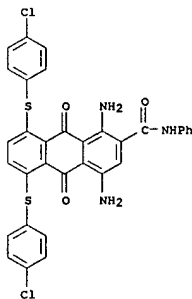


RN 94173-29-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-((4,5-dihydro-2-oxazolyl)-5,8-bis((4-methylphenyl)thio))- (9CI) (CA INDEX NAME)

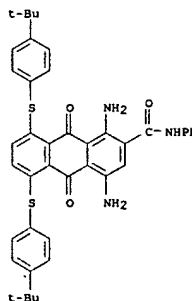


RN 94173-30-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-((4,5-dihydro-2-oxazolyl)-5,8-bis((1,1-dimethylethyl)phenyl)thio))- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

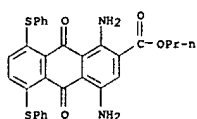


RN 94173-33-8 CAPLUS
 CN 2-Anthracenecarboxamide, 1,4-diamino-5,8-bis((4-(1,1-dimethylethyl)phenyl)thio)-9,10-dihydro-9,10-dioxo-N-phenyl- (9CI) (CA INDEX NAME)

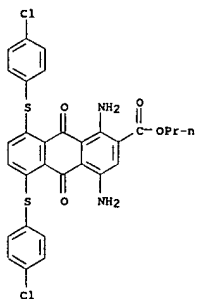


RN 94173-34-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, propyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STM (Continued)

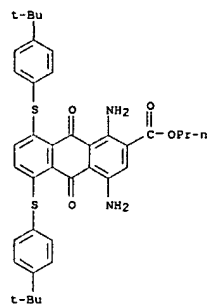


RN 94173-35-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, propyl ester (9CI) (CA INDEX NAME)

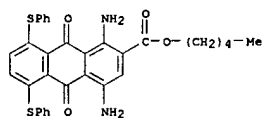


RN 94173-36-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, propyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STM (Continued)

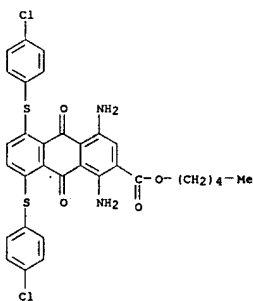


RN 94173-37-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, pentyl ester (9CI) (CA INDEX NAME)

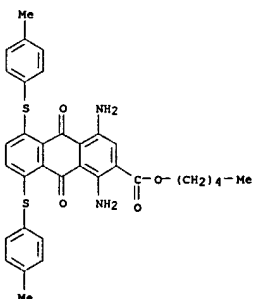


RN 94173-38-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STM (Continued)

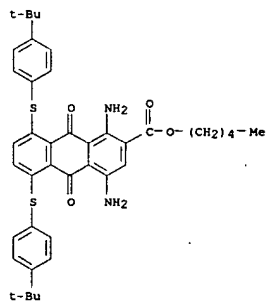


RN 94173-39-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

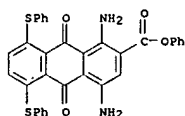


RN 94173-40-7 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STM (Continued)

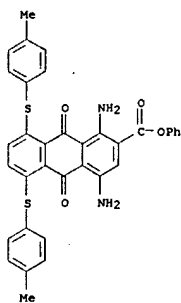


RN 94173-41-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

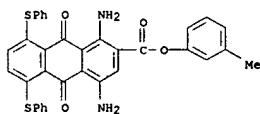


RN 94173-42-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

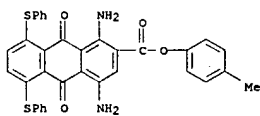


RN 94173-43-0 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

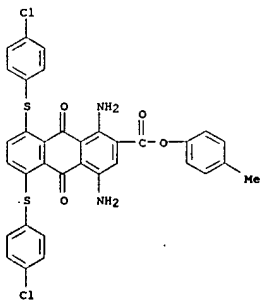


RN 94173-44-1 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

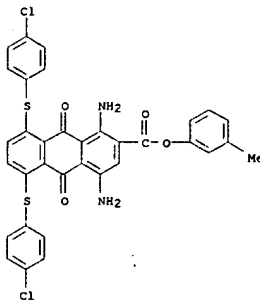


RN 94173-47-4 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

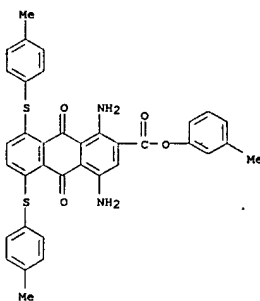


RN 94173-48-5 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-chlorophenyl)thio]-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

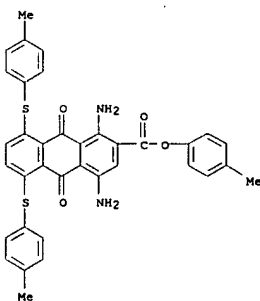


RN 94173-45-2 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-chlorophenyl)thio]-9,10-dioxo-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

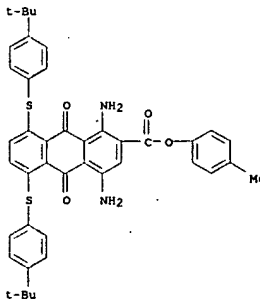


RN 94173-46-3 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis[(4-methylphenyl)thio]-, 3-methylphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

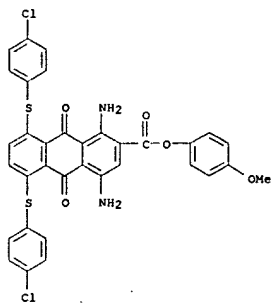


RN 94173-49-6 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methylphenyl ester (9CI) (CA INDEX NAME)

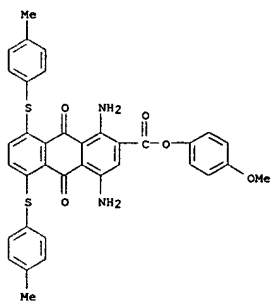


RN 94173-50-9 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

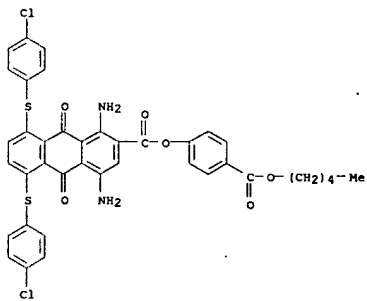


RN 94173-51-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

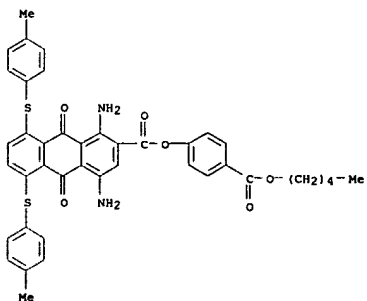


RN 94173-52-1 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-(1,1-

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

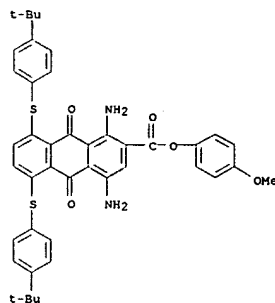


RN 94173-55-4 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

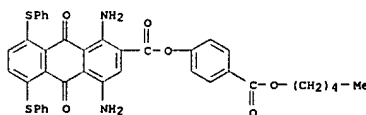


RN 94173-56-5 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
dimethylthiophenylthio]-9,10-dihydro-9,10-dioxo-, 4-methoxyphenyl ester (9CI) (CA INDEX NAME)

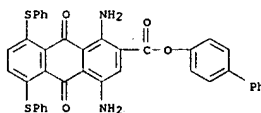


RN 94173-53-2 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis(phenylthio)-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

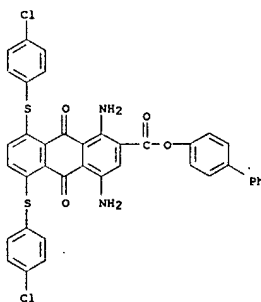


RN 94173-54-3 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, 4-[(pentyloxy)carbonyl]phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

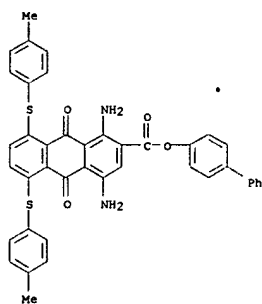


RN 94173-57-6 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

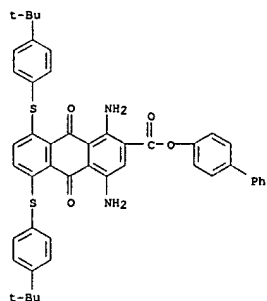


RN 94173-58-7 CAPLUS
CN 2-Anthracenecarboxylic acid, 1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

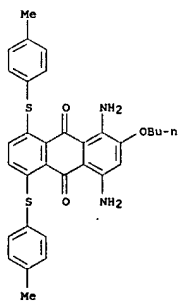


RN 94173-59-8 CAPLUS
 CN 2-Anthracenecarboxylic acid, 1,4-diamino-5,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]-9,10-dihydro-9,10-dioxo-, [1,1'-biphenyl]-4-yl ester (9CI) (CA INDEX NAME)

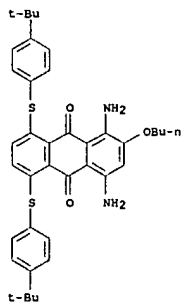


RN 94173-60-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis(phenylthio)- (9CI)
 (CA)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

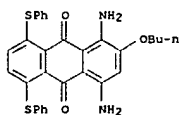


RN 94173-63-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis[[4-(1,1-dimethylethyl)phenyl]thio]- (9CI) (CA INDEX NAME)

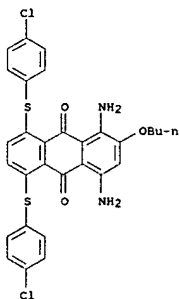


RN 94173-64-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(phenylmethoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

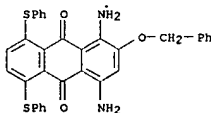


RN 94173-61-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

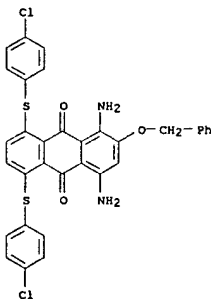


RN 94173-62-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-butoxy-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

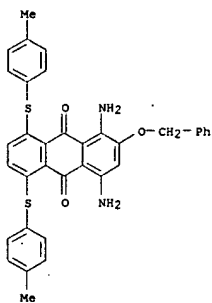


RN 94173-65-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

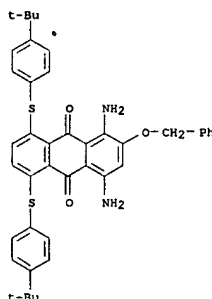


RN 94173-66-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-methylphenyl)thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

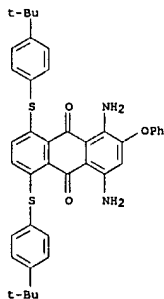


RN 94173-67-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(phenylmethoxy)- (9CI) (CA INDEX NAME)

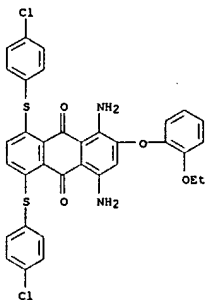


RN 94173-68-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-phenoxy-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

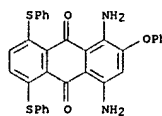


RN 94173-71-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)

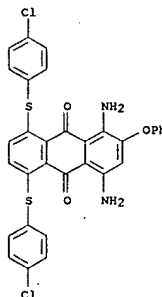


RN 94173-72-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-ethoxyphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

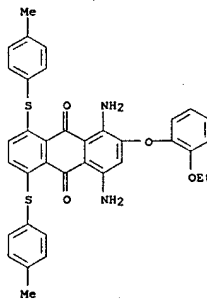


RN 94173-69-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

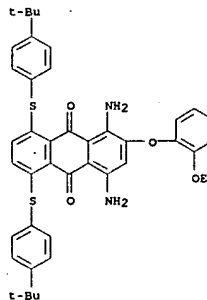


RN 94173-70-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-phenoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

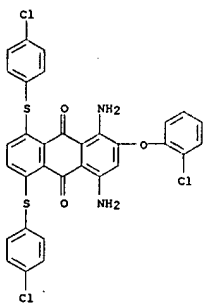


RN 94173-73-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(2-ethoxyphenoxy)- (9CI) (CA INDEX NAME)

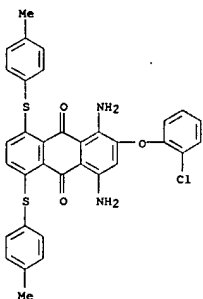


RN 94173-74-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

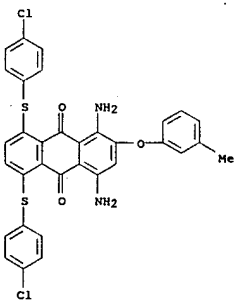


RN 94173-75-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

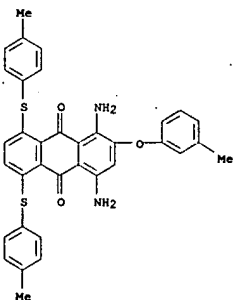


RN 94173-76-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(2-chlorophenoxy)-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

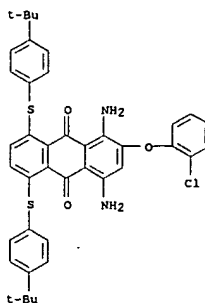


RN 94173-79-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-methylphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

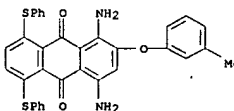


RN 94173-80-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

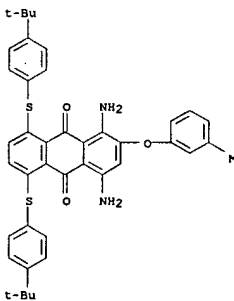


RN 94173-77-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-methylphenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

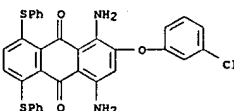


RN 94173-78-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(3-methylphenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

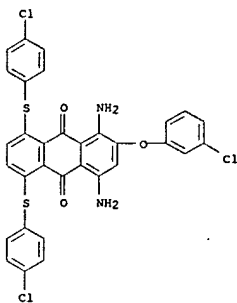


RN 94173-81-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

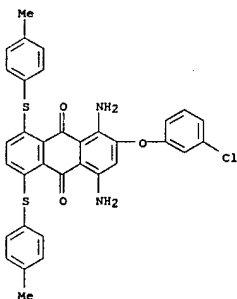


RN 94173-82-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

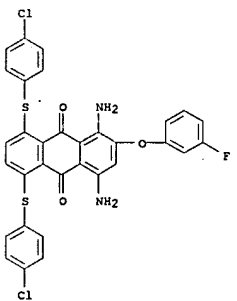


RN 94173-83-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

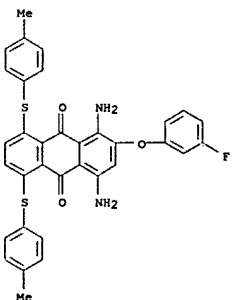


RN 94173-84-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-chlorophenoxy)-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

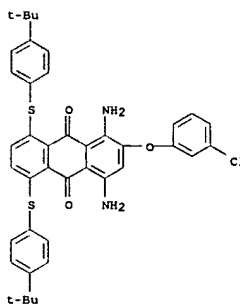


RN 94173-87-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-fluorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

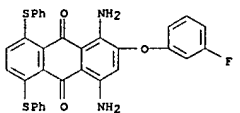


RN 94173-88-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

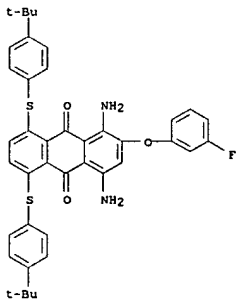


RN 94173-85-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(3-fluorophenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

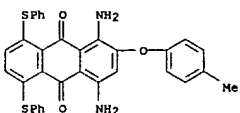


RN 94173-86-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-2-(3-fluorophenoxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

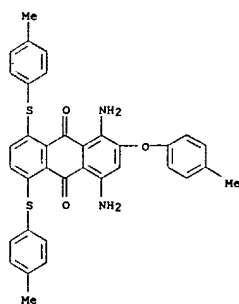


RN 94173-89-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-methylphenoxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

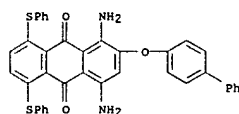


RN 94173-90-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-(4-methylphenoxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

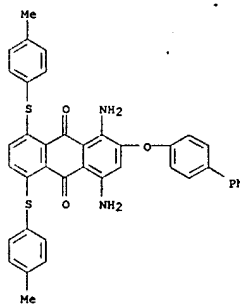


RN 94173-91-8 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-([1,1'-biphenyl]-4-yloxy)-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

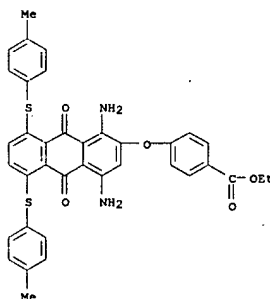


RN 94173-92-9 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-([1,1'-biphenyl]-4-yloxy)-5,8-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

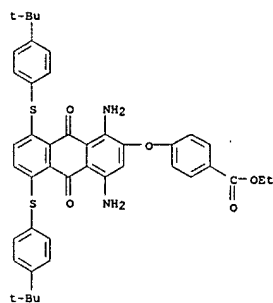


RN 94173-93-0 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

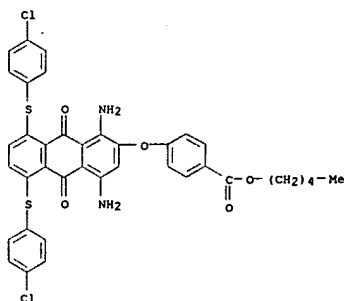


RN 94173-94-1 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

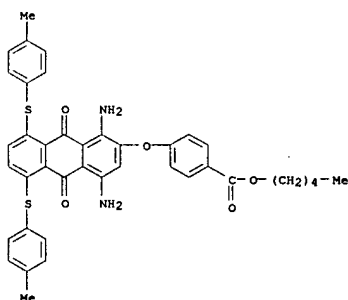


RN 94173-95-2 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

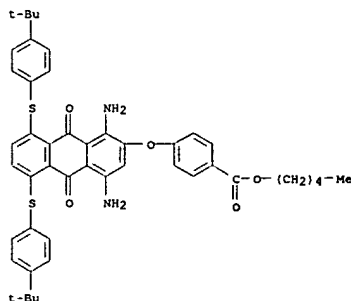


RN 94173-96-3 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-9,10-dihydro-5,8-bis[(4-methylphenyl)thio]-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

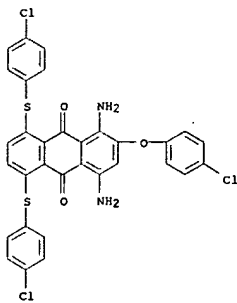


RN 94173-97-4 CAPLUS
CN Benzoic acid, 4-([1,4-diamino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy)-, pentyl ester (9CI) (CA INDEX NAME)

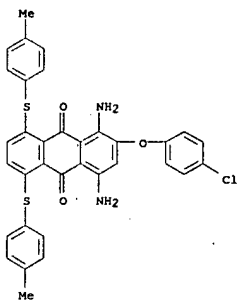


RN 94173-98-5 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-(4-chlorophenoxy)-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

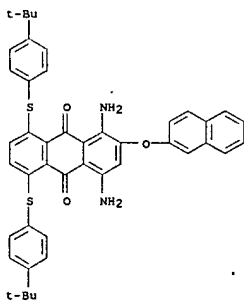


RN 94173-99-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-((4-chlorophenyl)thio)-5,8-bis((4-methylphenyl)thio)- (9CI) (CA INDEX NAME)

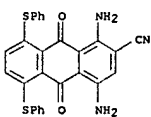


RN 94174-00-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2-((4-chlorophenyl)thio)-5,8-bis((4-(1,1-dimethylethyl)phenyl)thio)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

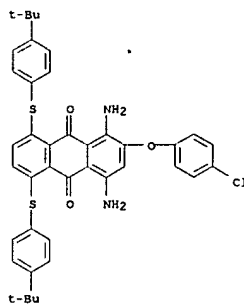


RN 94174-03-5 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-9,10-dihydro-9,10-dioxo-5,8-bis((phenylthio)- (9CI) (CA INDEX NAME)

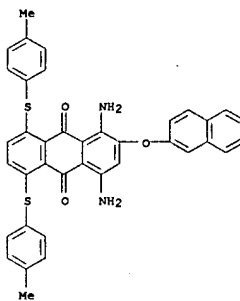


RN 94174-04-6 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-5,8-bis((4-chlorophenyl)thio)-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

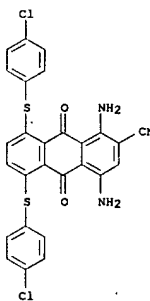


RN 94174-01-3 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis((4-methylphenyl)thio)-2-((2-naphthalenyloxy)- (9CI) (CA INDEX NAME)

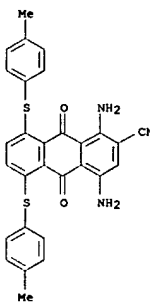


RN 94174-02-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis((4-(1,1-dimethylethyl)phenyl)thio)-2-((2-naphthalenyloxy)- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

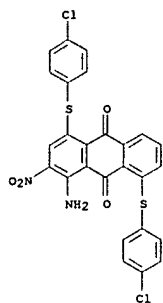


RN 94174-05-7 CAPLUS
 CN 2-Anthracenecarbonitrile, 1,4-diamino-9,10-dihydro-5,8-bis((4-methylphenyl)thio)-9,10-dioxo- (9CI) (CA INDEX NAME)

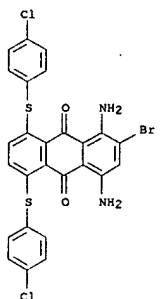


RN 94180-98-0 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-4,8-bis((4-chlorophenyl)thio)-2-nitro- (9CI) (CA INDEX NAME)

L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

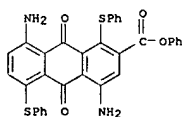


RN 94217-66-0 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

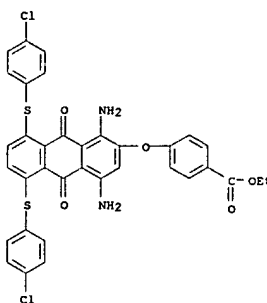


RN 94237-95-3 CAPLUS
CN Benzoic acid, 4-[[1,4-diamino-5,8-bis[(4-chlorophenyl)thio]-9,10-dihydro-9,10-dioxo-2-anthracenyl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

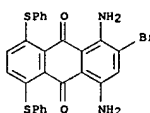
L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 42 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 94237-96-4 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-2-bromo-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



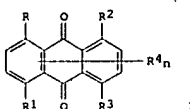
IT 94150-32-0
RL: USES (Uses)
(dye, for liquid-crystal electrooptical displays, order parameters of)
RN 94150-32-0 CAPLUS
CN 2-Anthracenecarboxylic acid, 4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-bis(phenylthio)-, phenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 43 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:620023 CAPLUS
DOCUMENT NUMBER: 101:220023
TITLE: Pleochroic dyes in solution with liquid crystal materials
INVENTOR(S): Harrison, Kenneth J.; Raynes, Edward P.; Saunders, Frances C.; Thompson, David J.
PATENT ASSIGNEE(S): United Kingdom Secretary for Defence, UK
SOURCE: U.S., 21 pp. Cont.-in-part of U.S. Ser. No. 352,060.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

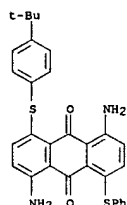
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4464282	A	19840807	US 1982-411095	19820824
AT 32345	E	19880215	AT 1984-108895	19820222
US 4496221	A	19850129	US 1982-352060	19820224
DD 201689	A5	19830803	DD 1982-237666	19820225
GB 2155945	A1	19851002	GB 1984-16656	19840629
GB 2155945	B2	19860326		
PRIORITY APPLN. INFO.:			GB 1981-5959	A 19810225
			GB 1981-5961	A 19810225
			GB 1981-6995	A 19810305
			GB 1982-19530	A 19810930
			US 1982-352060	A2 19820224
			GB 1981-29530	A 19810930
			EP 1984-108895	A 19820222
			GB 1982-5153	A3 19820222

GI



AB Anthraquinone pleochroic dyes suitable for liquid crystal display devices have the general formula I (R-R3 = H, SR5, ZR6R7, R4: R4 = NH2, OH, alkyl, aryl, NO2, halogen; n = 0-4; R5 = alkyl, aryl, cycloalkyl; R6, R7 = H, alkyl, aryl, cycloalkyl). Thus, a mixture containing 1,5-dichloroanthraquinone 12, K2CO3 8 g, DMF 100 mL, thiophenol (thiol 1:7 mL), and

L4 ANSWER 43 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 4-tert-butylphenylthiol (thiol 2:8 mL) was heated at 130-140° for 5 h, cooled, filtered, and the filter cake washed with a 50:50 mixt. of EtOH and 2N NaOH. The washed product was then washed with dil. AcOH, then with water, dried, dissolved in PhMe, and reprecipitated with MeOH to give 55% of 1-[(4-tert-butylphenylthio)-5-phenylthio]anthraquinone. The properties of this compd. in liq. crystal medium E43 included soly. 3.2%, λ_{max} = 464 nm, and an order parameter of 0.8.
 IT 84674-69-1P 84746-51-0P
 RL: PREP (Preparation)
 (preparation and characteristics of pleochroic, liquid crystal display applications in relation to)
 RN 84674-69-1 CAPLUS
 CN 9,10-Anthracenedione,
 1,5-diamino-4-[[4-(1,1-dimethylethyl)phenyl]thio]-8-(phenylthio)- (9CI) (CA INDEX NAME)



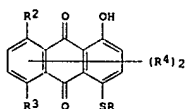
RN 84746-51-0 CAPLUS
 CN 9,10-Anthracenedione, 1-[[4-(1,1-dimethylethyl)phenyl]thio]-4,8-bis(methylamino)-5-(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 44 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1984:474303 CAPLUS
 DOCUMENT NUMBER: 101:74303
 TITLE: Pleochroic anthraquinone dyes
 INVENTOR(S): Thompson, David J.
 PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
 SOURCE: U.S. 14 pp. Cont.-in-part of U.S. Ser. No. 352,05.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4446047	A	19840501	US 1982-411094	19820824
US 4455253	A	19840619	US 1982-352058	19820224
GB 2155489	A1	19850925	GB 1984-15470	19840618
GB 2155489	B2	19860529		

PRIORITY APPLN. INFO.:
 GB 1981-5888 A 19810225
 GB 1981-5890 A 19810225
 GB 1981-29518 A 19810930
 US 1982-352058 A2 19820224
 GB 1982-23718 A 19820818
 GB 1982-3421 A 19820205

GI



AB Unsym. anthraquinones I (R2, R3 = OH or SR1; R, R1 = alkyl, mono- or bicyclic aryl, cycloalkyl; R = R1; R2 = SR1 when R3 = OH; R3 = SR1 when R2 = OH) are prepared for use in coloration of liquid crystals for electrooptic displays. I have high order parameters and good solubility

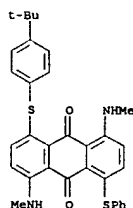
and stability in liquid crystal materials. Thus, reaction of 1,4,5,8-tetrachloroanthraquinone [81-58-3] with PhSH [108-98-5] and 4-Me3CC6H4SH [2396-68-1] at 130-140° in DMF containing K2CO3 gave a mixture of anthraquinone thio derivs. with λ_{max} 550 nm, order parameter 0.80, and solubility in liquid crystal mixture E43 14.7% at 20°.

Numerous other I were similarly prepared, and their properties in E43 were described.

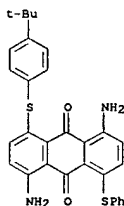
IT 84674-69-1P 84746-51-0P

10817271.trn

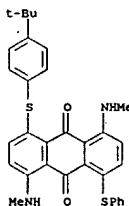
L4 ANSWER 43 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 44 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RL: PREP (Preparation)
 (pleochroic dye, manuf. and properties of, in liq. crystal mixt.)
 RN 84674-69-1 CAPLUS
 CN 9,10-Anthracenedione,
 1,5-diamino-4-[[4-(1,1-dimethylethyl)phenyl]thio]-8-(phenylthio)- (9CI) (CA INDEX NAME)



RN 84746-51-0 CAPLUS
 CN 9,10-Anthracenedione, 1-[[4-(1,1-dimethylethyl)phenyl]thio]-4,8-bis(methylamino)-5-(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1984:408709 CAPLUS
 DOCUMENT NUMBER: 101:8709
 TITLE: Anthraquinone dyes and dichroic material containing them
 INVENTOR(S): Blunck, Martin; Claussen, Uwe; Kroeck, Friedrich
 Wilhelm; Neeff, Ruetger
 PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 77 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3314467	A1	19840119	DE 1983-3314467	19830421
EP 103095	A2	19840321	EP 1983-106637	19830707
EP 103095	A3	19860827		
EP 103095	B1	19900829		
R: CH, DE, GB, LI				
JP 59027956	A2	19840214	JP 1983-128064	19830715
PRIORITY APPLN. INFO.:			DE 1982-3226843	A1 19820717
			DE 1983-3314467	A 19830421

OTHER SOURCE(S): MARPAT 101:8709
 AB Yellow to blue amino(arylthio)anthraquinones,
 (arylthio)hydroxyanthraquinones, amino(arylthio)hydroxyanthraquinones,
 and
 similar dyes with high order parameters (S) were prepared by conventional
 method and incorporated in liquid crystal compns. for use in guest-host
 type
 electrooptical display devices. Typical dyes are bluish red
 1-amino-4-[(4-tert-butylphenyl)thio]anthraquinone [90571-15-6] (S = 0.69
 in mixture of substituted cyclohexanes), bluish red 1,4-bis[(4-
 chlorophenyl)thio]-5,8-dihydroxyanthraquinone [90571-19-0] (S 0.74), and
 bluish pink 1-amino-5,8-bis(2-thienylthio)anthraquinone [90573-28-7] (S
 0.78). All 3 compds. were prepared by reaction of chloroanthraquinones

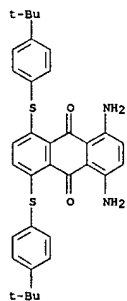
with
 thiols. Several hundred addnl. anthraquinone dyes and their S values are
 reported.

IT 90571-37-2 90571-38-3 90571-39-4
 90571-40-7 90571-41-8 90571-42-9
 90571-43-0 90571-44-1 90571-45-2
 90571-46-3 90571-47-4 90571-71-4
 90571-72-5 90571-73-6 90571-74-7
 90571-75-8 90571-76-9 90571-77-0
 90571-78-1 90571-79-2 90571-80-5
 90571-81-6 90571-82-7

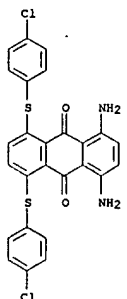
RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (dye, for liquid crystal electrooptical display devices, order

parameter
 of)
 RN 90571-37-2 CAPLUS

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

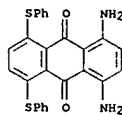


RN 90571-40-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

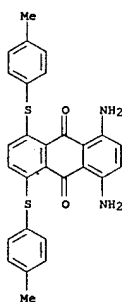


RN 90571-41-8 CAPLUS
 CN 9,10-Anthracenedione, 1,8-diamino-4,5-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

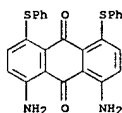


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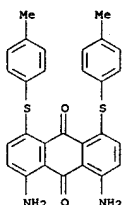


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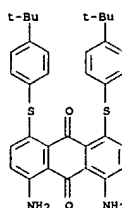
L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 90571-42-9 CAPLUS
 CN 9,10-Anthracenedione, 1,8-diamino-4,5-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)

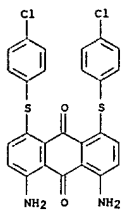


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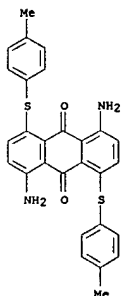


RN 90571-44-1 CAPLUS
 CN 9,10-Anthracenedione, 1,8-diamino-4,5-bis[(4-chlorophenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

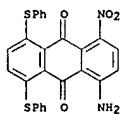


RN 90571-45-2 CAPLUS
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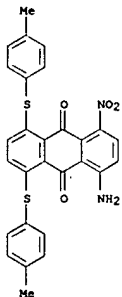


RN 90571-46-3 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

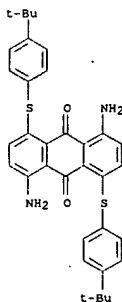


RN 90571-72-5 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-5,8-bis[(4-methylphenyl)thio]-4-nitro- (9CI)
 (CA INDEX NAME)

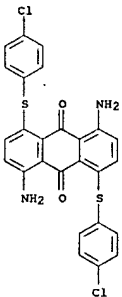


RN 90571-73-6 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-5,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-4-nitro- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

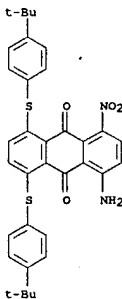


RN 90571-47-4 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-chlorophenyl)thio]- (9CI)
 (CA INDEX NAME)

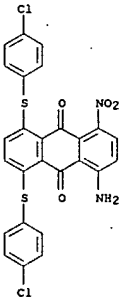


RN 90571-71-4 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-4-nitro-5,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

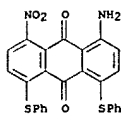


RN 90571-74-7 CAPLUS
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 (CA INDEX NAME)

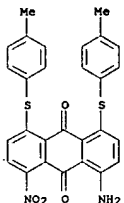


RN 90571-75-8 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-8-nitro-4,5-bis(phenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



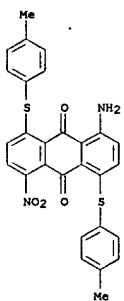
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 CN 9,10-Anthracenedione, 1-amino-4,5-bis[(4-methylphenyl)thio]-8-nitro-
 (9CI)
 (CA INDEX NAME)



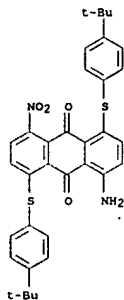
RN 90571-77-0 CAPLUS
 CN 9,10-Anthracenedione,
 1-amino-4,8-bis[(4-(1,1-dimethylethyl)phenyl)thio]-5-nitro- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

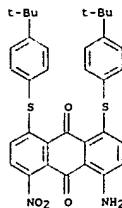
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 (CA INDEX NAME)



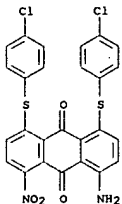
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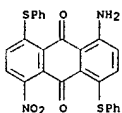
L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 90571-78-1 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-4,5-bis[(4-chlorophenyl)thio]-8-nitro-
 (9CI)
 (CA INDEX NAME)

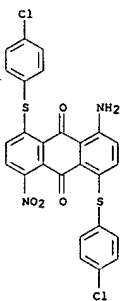


RN 90571-79-2 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-5-nitro-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 90571-82-7 CAPLUS
 CN 9,10-Anthracenedione, 1-amino-4,8-bis[(4-chlorophenyl)thio]-5-nitro-
 (9CI)
 (CA INDEX NAME)



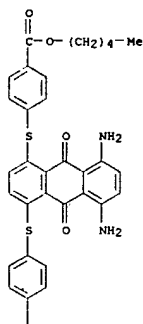
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 90575-99-8 90588-35-5 90588-40-2
 90588-49-1 90588-59-3 90588-69-5
 90588-78-6 90588-99-1 90589-09-6
 90589-13-2 90589-57-4 90589-63-2
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RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (dye, for liquid crystal electrooptical display devices, preparation
 and order parameter of)

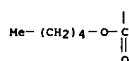
RN 90575-48-7 CAPLUS
 CN Benzoic acid, 4,4'-[(5,8-diamino-9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)bis(thio)]bis-, dipentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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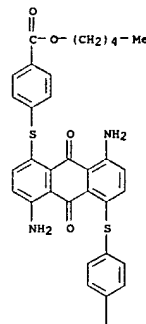
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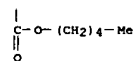
RN 90575-49-8 CAPLUS
 CN Benzoic acid, 4,4'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio)]bis-, dipentyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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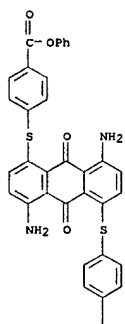
PAGE 2-A



RN 90575-59-0 CAPLUS
 CN Benzoic acid, 4,4'-bis-[(4,8-diamino-9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)bis(thio)]bis-, diphenyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

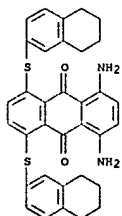
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RN 90575-67-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis-[(5,6,7,8-tetrahydro-2-naphthalenyl)thio]- (9CI) (CA INDEX NAME)

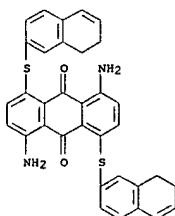


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L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

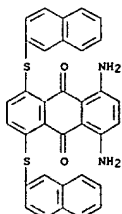
RN 90575-75-0 CAPLUS

CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis-[(7,8-dihydro-2-naphthalenyl)thio]- (9CI) (CA INDEX NAME)



RN 90575-81-8 CAPLUS

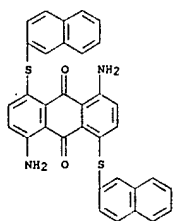
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(2-naphthalenylthio)- (9CI) (CA INDEX NAME)



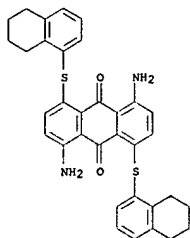
RN 90575-82-9 CAPLUS

CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(2-naphthalenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

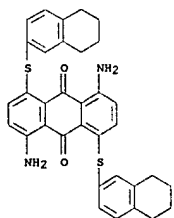


RN 90575-91-0 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(5,6,7,8-tetrahydro-1-naphthalenyl)thio]- (9CI) (CA INDEX NAME)

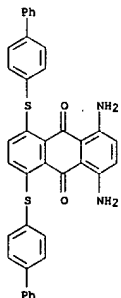


RN 90575-98-7 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(1-naphthalenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

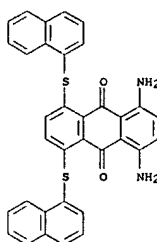


RN 90588-40-2 CAPLUS
CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis([1,1'-biphenyl]-4-ylthio)- (9CI) (CA INDEX NAME)

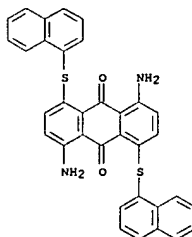


RN 90588-49-1 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-cyclohexylphenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



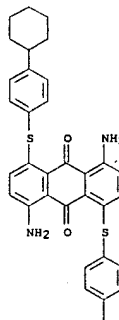
RN 90575-99-8 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(1-naphthalenylthio)- (9CI) (CA INDEX NAME)



RN 90588-35-5 CAPLUS
CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(5,6,7,8-tetrahydro-2-naphthalenyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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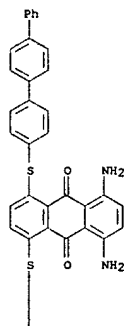
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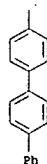
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CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis([1,1':4',1''-terphenyl]-4-ylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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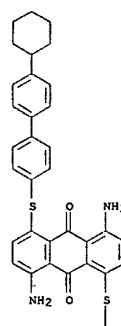
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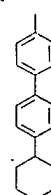
RN 90588-69-5 CAPLUS
 CN 9,10-Anthracenedione,
 1,5-diamino-4,8-bis[(4'-cyclohexyl[1,1'-biphenyl]-4-yl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

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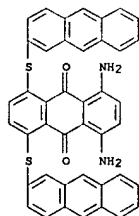


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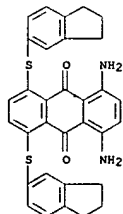


RN 90588-78-6 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(2-anthracenylthio)- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

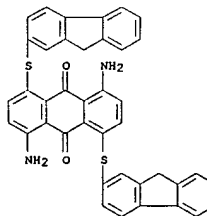


RN 90588-99-1 CAPLUS
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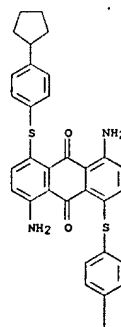
RN 90589-09-6 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(9H-fluoren-2-ylthio)- (9CI)
 (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 90589-13-2 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(4-cyclopentylphenyl)thio]- (9CI) (CA INDEX NAME)

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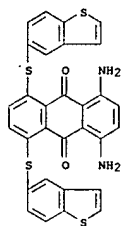


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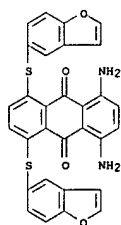


L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

RN 90589-57-4 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(benzo[b]thien-5-ylthio)- (9CI) (CA INDEX NAME)

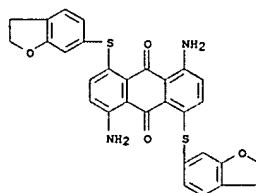


RN 90589-63-2 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis(5-benzofuranylthio)- (9CI) (CA INDEX NAME)

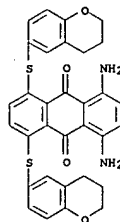


RN 90589-68-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis[(2,3-dihydro-6-benzofuranyl)thio]- (9CI) (CA INDEX NAME)

L4 ANSWER 45 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 90589-88-1 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5,8-bis[(3,4-dihydro-2H-1-benzopyran-6-yl)thio]- (9CI) (CA INDEX NAME)

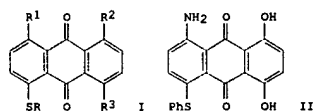


L4 ANSWER 46 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:135299 CAPLUS
 DOCUMENT NUMBER: 98:135299
 TITLE: Guest-host effect liquid crystal display devices
 PATENT ASSIGNEE(S): Canon K. K., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

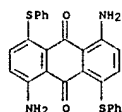
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57092080	A2	19820608	JP 1980-167575	19801128
JP 01053315	B4	19891113		
PRIORITY APPLN. INFO.:			JP 1980-167575	19801128

GI



AB Liquid crystal comps. for guest-host effect display devices contain pleochroic dyes of the formula I (R = aryl, heterocyclyl; R1, R2, R3 = H, OH, alkoxy, arylmercapto, NHR4; R4 = H, alkyl, cycloalkyl, acyl, alkylsulfonyl, arylsulfonyl). Thus, II (1 weight%) was added to a cyanobiphenyl type liquid crystal composition (E-8), and a guest-host effect display device was then prepared by using the mixture. The resultant display device gave sharp images.

IT 82188-16-7
 RL: TEM (Technical or engineered material use): USES (Uses)
 (pleochroic dye, for guest-host effect liquid crystal display devices)
 RN 82188-16-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 46 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 47 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:117184 CAPLUS
 DOCUMENT NUMBER: 98:117184
 TITLE: Liquid crystal materials comprising pleochroic dyes
 INVENTOR(S): Harrison, Kenneth John; Raynes, Edward Peter; Saunders, Frances Carolyn; Thompson, David John
 PATENT ASSIGNEE(S): United Kingdom Secretary for Defence, UK
 SOURCE: Eur. Pat. Appl., 54 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 59095	A1	19820901	EP 1982-300891	19820222
EP 59095	B1	19870429		
R: AT, CH, DE, FR, GB, IT, NL				
GB 2093475	A	19820902	GB 1982-5153	19820222
GB 2093475	B2	19851009		
EP 155345	A2	19850925	EP 1984-108895	19820222
EP 155345	A3	19851218		
EP 155345	B1	19880203		
R: AT, CH, DE, FR, GB, IT, LI, NL				
AT 26856	E	19870515	AT 1982-300891	19820222
AT 32345	E	19880215	AT 1984-108895	19820222
JP 57172971	A2	19821025	JP 1982-28033	19820223
JP 02043791	B4	19901001		
CA 1183343	A1	19850305	CA 1982-396957	19820224
DD 201689	A5	19830803	DD 1982-237666	19820225
GB 2155945	A1	19851002	GB 1984-16656	19840629
GB 2155945	B2	19860326		
PRIORITY APPLN. INFO.:				
			GB 1981-5959	A 19810225
			GB 1981-5961	A 19810225
			GB 1981-6995	A 19810305
			GB 1981-29530	A 19810930
			EP 1982-300891	P 19820222
			EP 1984-108895	A 19820222
			GB 1982-5153	A3 19820222

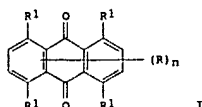
OTHER SOURCE(S): MARPAT 98:117184
 GI

L4 ANSWER 48 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1983:91032 CAPLUS
 DOCUMENT NUMBER: 98:91032
 TITLE: Pleochroic anthraquinone dyes
 INVENTOR(S): Thompson, David John
 PATENT ASSIGNEE(S): Imperial Chemical Industries, PLC, UK
 SOURCE: Eur. Pat. Appl., 38 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 3
 PATENT INFORMATION:

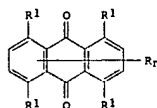
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 59036	A1	19820901	EP 1982-300584	19820205
EP 59036	B1	19870729		
R: CH, DE, FR, GB, IT				
GB 2094822	A	19820922	GB 1982-3421	19820205
GB 2094822	B2	19860305		
EP 142617	A1	19850529	EP 1984-108695	19820205
EP 142617	B1	19870722		
R: CH, DE, FR, GB, IT, LI				
JP 57159262	A2	19820930	JP 1982-28232	19820225
JP 02037948	B4	19900828		
GB 2155489	A1	19850925	GB 1984-15470	19840618
GB 2155489	B2	19860529		
PRIORITY APPLN. INFO.:				
			GB 1981-5888	A 19810225
			GB 1981-5890	A 19810225
			GB 1981-29518	A 19810930
			EP 1982-300584	P 19820205
			GB 1982-3421	A 19820205

OTHER SOURCE(S): MARPAT 98:91032
 GI

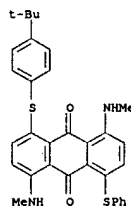


AB Water-insol., nonionic dyes of general structure I are prepared, where R = NH2, OH, alkyl, aryl, NO2, or halo; n = 0-4; R1 (independently) = H, SR2, NR3R4, or R (R2 = alkyl, aryl, cycloalkyl; R3, R4 = H, alkyl, cycloalkyl, aryl); there are 22 different SR2 groups; and when only 2 R1 groups are SR2, 21 R2 is aryl and the 2 SR2 groups are in the 1,5- or

L4 ANSWER 47 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

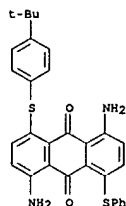


AB Liquid crystal compns. for use in guest-host liquid-crystal display devices are composed of a liquid crystal material and a pleochroic anthraquinone dye (I: R = NH2, OH, NO2, aryl, alkyl, or halo; R1 = R, H, SR2 or NR3R4 where R2 is alkyl, aryl, or cycloalkyl and R3 and R4 are independently H, alkyl, cycloalkyl, or aryl). Thus, a 14.7% solution of the reaction product of 1,4,5,8-tetrachloroanthraquinone with PhSH and tert-butylphenylthiol [main component bis(phenylthio)bis(tert-butylphenylthio)anthraquinone] in E43 showed an absorption maximum of 550 nm and an order parameter of 0.80.
 IT 84746-51-0P
 RL: PREP (Preparation)
 (preparation, solubility and spectral properties of, in liquid crystal compns.)
 RN 84746-51-0 CAPLUS
 CN 9,10-Anthracenedione, 1-[[4-(1,1-dimethylethyl)phenyl]thio]-4,8-bis(methylamino)-5-(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 48 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

AB Liquid crystal compns. for use in guest-host liquid-crystal display devices are composed of a liquid crystal material and a pleochroic anthraquinone dye (I: R = NH2, OH, NO2, aryl, alkyl, or halo; R1 = R, H, SR2 or NR3R4 where R2 is alkyl, aryl, or cycloalkyl and R3 and R4 are independently H, alkyl, cycloalkyl, or aryl). Thus, a 14.7% solution of the reaction product of 1,4,5,8-tetrachloroanthraquinone with PhSH and tert-butylphenylthiol [main component bis(phenylthio)bis(tert-butylphenylthio)anthraquinone] in E43 showed an absorption maximum of 550 nm and an order parameter of 0.80.
 IT 84746-51-0P
 RL: PREP (Preparation)
 (preparation, solubility and spectral properties of, in liquid crystal compns.)
 RN 84746-51-0 CAPLUS
 CN 9,10-Anthracenedione, 1-[[4-(1,1-dimethylethyl)phenyl]thio]-8-(phenylthio)- (9CI) (CA INDEX NAME)



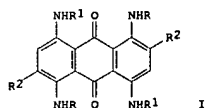
L4 ANSWER 49 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1982:618028 CAPLUS
 DOCUMENT NUMBER: 97:218028
 TITLE: Anthraquinone dyes for liquid-crystal materials
 INVENTOR(S): Blunck, Martin; Claussen, Uwe; Neeff, Ruetger
 PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
 SOURCE: Eur. Pat. Appl., 47 pp.
 CODEN: EPXXDW

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 54217	A1	19820623	EP 1981-110030	19811201
EP 54217	B1	19840627		
R: CH, DE, FR, GB, IT				
DE 3046904	A1	19820715	DE 1980-3046904	19801212
US 4585574	A	19860429	US 1981-324919	19811125
JP 57123257	A2	19820731	JP 1981-198731	19811211
PRIORITY APPL. INFO.:			DE 1980-3046904	A 19801212

GI



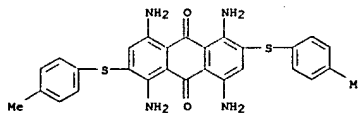
AB Anthraquinone dyes (I; R, R' = H, substituted alkyl, cycloalkyl, aryl, aralkyl; R2 = aryl, heterocyclyl, OR3, SR3, CH:NR3, CO2R3, CHO, SO2R3; R3 = optionally substituted aryl, aralkyl, heterocyclyl; when R = R1 = H, R2 = optionally substituted phenoxy) were prepared having high order parameters

and were useful in guest-host liquid crystal displays. Thus, a mixture of phenol [108-95-2] and K2CO3 was heated at 120° with 1,5-diamino-2,6-dibromo-4,8-bis(p-tosylamino)anthraquinone [83426-53-3], the mixture heated at 160-170° for 14 h, 1,5-diamino-2,6-diphenoxy-4,8-bis(p-tosylamino)-2-anthraquinone [83423-60-3] isolated and heated with H2SO4, and the crystalline sulfate [83423-61-4] isolated and neutralized with NH3 to give I (R = R1 = H, R2 = PhO) [83423-62-5], showing order parameter 0.80 in a nematic liquid crystal mixture. Approx. 300 other I were prepared

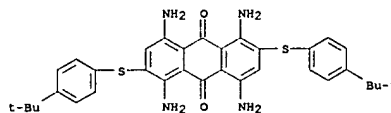
IT 83426-74-8 83426-75-9 83426-76-0
 RL: PRP (Properties)

L4 ANSWER 49 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

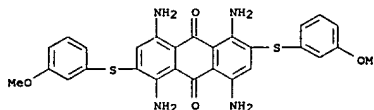
(order parameter of)
 RN 83426-74-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4,5,8-tetraamino-2,6-bis[(4-methylphenyl)thio]- (9CI) (CA INDEX NAME)



RN 83426-75-9 CAPLUS
 CN 9,10-Anthracenedione, 1,4,5,8-tetraamino-2,6-bis[(1,1-dimethylethyl)phenyl]thio]- (9CI) (CA INDEX NAME)



RN 83426-76-0 CAPLUS
 CN 9,10-Anthracenedione, 1,4,5,8-tetraamino-2,6-bis[(3-methoxyphenyl)thio]- (9CI) (CA INDEX NAME)

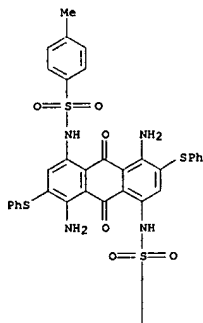


IT 83426-72-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

RN 83426-72-6 CAPLUS
 CN Benzenesulfonamide, N,N'-[4,8-diamino-9,10-dihydro-9,10-dioxo-3,7-bis(phenylthio)-1,5-anthracenediyl]bis(4-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 49 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-A

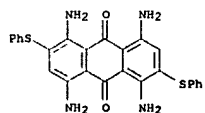


PAGE 2-A



IT 83426-73-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)

RN 83426-73-7 CAPLUS
 CN 9,10-Anthracenedione, 1,4,5,8-tetraamino-2,6-bis(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 50 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1982:464203 CAPLUS
 DOCUMENT NUMBER: 97:64203
 TITLE: Liquid crystal materials containing anthraquinone pleochroic dyes
 INVENTOR(S): Harrison, Kenneth John; Raynes, Edward Peter; Saunders, Frances Carolyn; Thompson, David John
 PATENT ASSIGNEE(S): United Kingdom Secretary for Defence, UK
 SOURCE: Brit. UK Pat. Appl., 20 pp.
 CODEN: BAXXDU
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2082196	A	19820303	GB 1981-23186	19810728
GB 2082196	B2	19850123	US 1981-287118	19810727
US 4405211	A	19830920	EP 1981-303471	19810728
EP 49035	A1	19820407		
EP 49035	B1	19851023		
R: AT, CH, DE, FR, GB, IT, NL				
JP 57073067	A2	19820507	JP 1981-118396	19810728
JP 04009830	B4	19920221		
CA 1168036	A1	19840529	CA 1981-382632	19810728
AT 16198	E	19851115	AT 1981-303471	19810728
DD 200091	C	19830316	DD 1981-232183	19810728
PRIORITY APPLN. INFO.:			GB 1980-24797	A 19800729
			EP 1981-303471	A 19810728

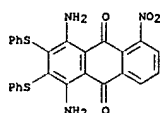
OTHER SOURCE(S): MARPAT 97:64203
 AB A composition suitable for a guest-host liquid crystal device comprises a solution of liquid crystal material and a pleochroic dye which is an anthracene derivative. Thus, a mixture containing 1,5-dichloroanthraquinone 100, DMF 474, thiophenol 135 and K2CO3 63 parts was heated at 125° for 3 h and cooled to 5° for 1 h to give a precipitate which was filtered off, washed with 50/50 mixture of EtOH 95 and NaOH 84, slurried with 500 parts of EtOH/NaOH mixture and stirred 1 h. The resulting precipitate was filtered off and washed again with EtOH/NaOH mixture followed by H2O-CH3CO2H (250-25 parts) and H2O, dried at 70° to give 140.4 parts of 1,5-bis(phenylthio)anthraquinone (m.p. 256°). The obtained dye had good photostability to UV radiation and λ_{max} = 447-455 nm. When used in a liquid crystal device with host E43, order parameter S (at 20°) was 0.8 (the solubility of the dye in E43 was 1 weight% at 20°).
 IT 82188-09-8P 82188-10-1P 82188-16-7P
 RL: FRP (Properties); PREP (Preparation)
 (preparation and optical properties of, for liquid crystal guest-host display device)

L4 ANSWER 51 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

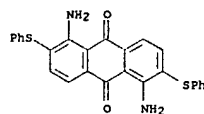
ACCESSION NUMBER: 1974:4913 CAPLUS
 DOCUMENT NUMBER: 80:4913
 TITLE: Anthraquinone dyes
 INVENTOR(S): Yamada, Eiji; Yamaguchi, Kiichiro; Akamatsu, Takashi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd.
 SOURCE: Jpn. Tokkyo Koho, 8 pp.
 CODEN: JAXXAD
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 47038529	B4	19720929	JP 1968-91918	19681213

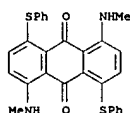
AB Reaction of haloanthraquinones I (R = halogen, n = 1 or 2) with mercaptans
 R1SH (R1 = alkyl, hydroxyalkyl, Ph, substituted Ph) in the presence of an acid binding agent gave anthraquinone dyes (II) for synthetic fibers, especially polyester and cellulose ester fibers. Thus, PhSH was added to a mixture of I (R = Cl, n = 2), N(CH2CH2OH)3, and DMF, the mixture kept at 25-35.deg. for 1 hr, and MeOH added to precipitate dark blue crystalline 1,4-diamino-5-nitro-2,3-bis(phenylthio)anthraquinone (II, R1 = Ph, n = 2) (43051-17-8).
 IT 43051-17-8P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 43051-17-8 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-5-nitro-2,3-bis(phenylthio)- (9CI) (CA INDEX NAME)



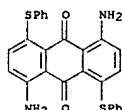
L4 ANSWER 50 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 82188-09-8 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(methylamino)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



RN 82188-10-1 CAPLUS
 CN 9,10-Anthracenedione, 1,5-bis(methylamino)-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



RN 82188-16-7 CAPLUS
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)

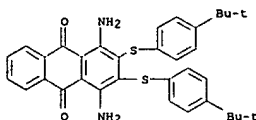


L4 ANSWER 52 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:528069 CAPLUS
 DOCUMENT NUMBER: 77:128069
 TITLE: Disperse 1,4-diaminoanthraquinone dyes for cotton
 INVENTOR(S): Blackwell, John
 PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co.
 SOURCE: Ger. Offen., 25 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2061512	A	19720615	DE 1970-2061512	19701214

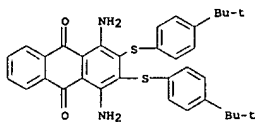
PRIORITY APPLN. INFO.: DE 1970-2061512 19701214
 AB Three title dyes [I: R = R1 = SC6H4CMe3-p, (RR1) CON(C8H17-n)CO or CON(CH2Ph)CO] were prepared and used for dyeing or printing cotton or polyester-cotton blends fast blue or turquoise shades from aqueous media containing glycols or glycol derivs. Thus, 1,4-diamino-2,3-dichloroanthraquinone, p-Me3CC6H4SH, and DMF were heated at 70.deg., 30% NaOH added, and the mixture stirred 1 hr at 70.deg. to give a dye (I, R = R1 = SC6H4CMe3-p) [35170-69-5], level blue on cotton. Heating 1,4-diaminoanthraquinone-2,3-dicarboximide with n-C8H17NH2 20 hr at 100-10.deg. gave a turquoise dye [I, (RR1) = CON(C8H17-n)CO] [35170-70-8].
 Another turquoise dye [I, (RR1) = CON(CH2Ph)CO] [3176-90-7] was similarly prepared
 IT 35170-69-5P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 35170-69-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-(1,1-dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)



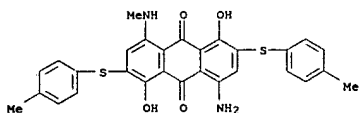
L4 ANSWER 53 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1972:476671 CAPLUS
 DOCUMENT NUMBER: 77:76671
 TITLE: Anthraquinone disperse dyes for water-swellable
 cellulose fibers
 INVENTOR(S): Blackwell, John
 PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co.
 SOURCE: U.S., 6 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3656880	A	19720418	US 1969-879901	19691125
PRIORITY APPLN. INFO.:			US 1969-879901	A 19691125

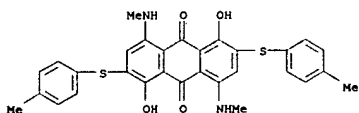
AB Treatment of 1,4-diamino-2,3-dichloroanthraquinone (I) with mercaptoaryl
 compds. or treatment of 1,4-diaminoanthraquinone-2,3-dicarboximide with
 amines gave anthraquinone dyes II (R = aryl) or III (R1 = PhCH2 or
 n-octyl), resp., which colored cotton and polyester-cotton fabrics
 uniform
 blue or turquoise shades fast to washing, dry cleaning, and crocking and
 having a reflectance color value (S') .geq. 2 after scour. Thus, 30%
 NaOH
 was added in 20 min to a stirred mixture of DMF, I, and 4-tert-BuC6H4SH
 at
 70.deg., and the mixture was stirred 1 hr at 70.deg. to give
 1,4-diamino-2,3-bis(p-tert-butylphenylthio)anthraquinone [I
 35170-69-5], blue on 65:35 polyester-cotton fabric.
 N-octyl-1,4-diaminoanthraquinone-2,3-dicarboximide (III, R1 = n-octyl)
 [35170-70-8] gave turquoise shades on cotton.
 IT 35170-69-5P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)
 RN 35170-69-5 CAPLUS
 CN 9,10-Anthracenedione, 1,4-diamino-2,3-bis[(4-(1,1-
 dimethylethyl)phenyl)thio]- (9CI) (CA INDEX NAME)



L4 ANSWER 54 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 16673-11-3 CAPLUS
 CN Anthraquinone,
 4-amino-1,5-dihydroxy-8-(methylamino)-2,6-bis(p-tolylthio)-
 (8CI) (CA INDEX NAME)



RN 20078-16-4 CAPLUS
 CN Anthraquinone, 1,5-dihydroxy-4,8-bis(methylamino)-2,6-bis(p-tolylthio)-
 (8CI) (CA INDEX NAME)



L4 ANSWER 54 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1968:468254 CAPLUS
 DOCUMENT NUMBER: 69:68254
 TITLE: Anthraquinone disperse dyes
 INVENTOR(S): Buecheler, Paul
 PATENT ASSIGNEE(S): Sandoz Ltd.
 SOURCE: Fr., 4 pp.
 CODEN: FRXXAK
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1487798		19670707	FR 1970-922	19660726
CH 463665			CH	
DE 1644649			DE	
GB 1145478			GB	
PRIORITY APPLN. INFO.:			CH	19650727

GI For diagram(s), see printed CA Issue.
 AB I and II, blue dyes for polyester fibers (III), were prepared by heating
 the
 corresponding 3,7- or 3,6-disulfonic acid derivs. with YSH in aqueous
 alkaline
 solution. Thus, a mixture of di-Na 1-(methylamino)-4,8-dihydroxy-5-
 aminoanthraquinonesulfonate 25, di-Na 1,5-bis(methylamino)-4,8-
 dihydroxyanthraquinone-3,7-disulfonate 25, and 604 Na2S 100 parts was
 boiled, diluted with 200 parts H2O, treated with 100 parts NaCl, the
 precipitate
 filtered, washed neutral with 10% NaCl solution and with H2O, and dried
 to
 give a mixture of I (Z = 50% H-50% Me, Y = H) (IV), blue on III. Me2S04
 (10
 parts) was added in 30 min. with stirring to a mixture of IV 8, 30% NaOH
 8,
 H2O 150, and pyridine 0.1 part while maintaining pH 10 with NaOH
 solution,
 the precipitate filtered, washed, suspended in 500 parts H2O, heated to
 80°, and treated with 6 parts 30% HCl to give a mixture of I (Z = H
 and Me, Y = Me), blue-green in PhCl, greenish blue on III. Similarly,
 the
 following I mixts. were prepared (Z, Y, color in PhCl, and shade on III
 given): Me and H, 4-MeC6H4, green-blue, greenish blue; Me and H,
 HOCH2CH2,
 blue-green, turquoise-blue. Similarly were prepared II mixture (same
 data
 given): Me and H, HOCH2CH2, blue-green, -; Me and H, Ph and 4-H2NC6H4,
 greenish blue, -. Also prepared was a blue-green mixture of I (Z = H
 and Me,
 Y = sec-Bu) and II (Z = H and Me, Y = sec-Bu).
 IT 16673-11-3P 20078-16-4P, Anthraquinone,
 1,5-dihydroxy-4,8-bis(methylamino)-2,6-bis(p-tolylthio)-
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

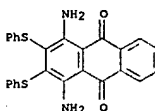
L4 ANSWER 55 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1968:88194 CAPLUS
 DOCUMENT NUMBER: 68:88194
 TITLE: Sulfonated anthraquinone dyes
 INVENTOR(S): Schwander, Hans R.
 PATENT ASSIGNEE(S): Geigy, J. R., A.-G.
 SOURCE: Patentschrift (Switz.), 6 pp.
 CODEN: SWXJAS
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CH 440505		19671229	CH 1959-107965	19590724

GI For diagram(s), see printed CA Issue.
 AB Anthraquinone dyes containing anilino, phenylmercapto, or phenoxy groups
 were
 treated with 2,4-Cl2C6H3CONHCH2OH (I) followed by oleum to give light-
 and

wet-fast blue and violet dyes for wool. Thus, 12.7 parts II (X = H, R =
 cyclohexyl, R1 = 2,4-Me2C6H3) was dissolved at 10-15° in 130 parts
 20% H2SO4, treated with 7 parts I, stirred at 10-15° for 24 hrs.,
 poured onto ice, filtered, and dried to give a blue condensation product,
 blue in organic solvents, which was treated with 10% oleum at 15-18°
 for 24 hrs. to give a wet-fast greenish blue dye. Similarly, other dyes
 were prepared from II (R = R1) (X, R, and shade on wool given): H,
 2,4,6-Me3C6H2, blue; Cl, 2,4,6-Me3C6H2, greenish blue; H,
 2,4,6-Cl3C6H2, reddish blue; H, 1,2,3,4-tetrahydro-2-naphthyl, blue;
 H, 4-MeC6H4, green. II (X = H, R = R1 = 2,4,6-Br(Me)2C6H2) and
 2-Cl6H4CONHCH2OH gave a reddish blue dye. Similarly, dyes were prepared
 from III and II (X, R, R1, R2, and shade given): S, H, SPh, H, violet; O,
 H, OPh, H, red-violet; O, Bu, OC6H4Bu-4, H, red-violet; O, C5H11,
 OC6H4C5H11-4, red-violet; O, H, H, 2,4,6-Me3C6H2, blue violet; O, H, H,
 2,4-Me2C6H4, reddish blue; O, C5H11, H, 2,4,6-Me3C6H2, blue-violet.

IT 18039-04-8
 RL: USES (Uses)
 (anthraquinone dyes from)
 RN 18039-04-8 CAPLUS
 CN Anthraquinone, 1,4-diamino-2,3-bis(phenylthio)- (8CI) (CA INDEX NAME)



L4 ANSWER 56 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN
 ACCESSION NUMBER: 1966:68481 CAPLUS
 DOCUMENT NUMBER: 64:68481
 ORIGINAL REFERENCE NO.: 64:12853e-h, 12854a-c
 TITLE: Alkyl- and arylsulfonylantraquinones
 PATENT ASSIGNEE(S): Farbenfabriken Bayer A.-G.
 SOURCE: 32 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6504223		19651123	NL 1965-4223	19650402
PRIORITY APPLN. INFO.:		DE		19640522

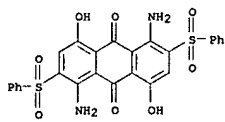
GI For diagram(s), see printed CA Issue.

AB Dyes of the general formula I were prepared for dyeing polyamide, polyesters, polyurethanes, poly(ethylene terephthalate) (Ia), polyacrylonitrile, and cellulose esters. In formula I, R = Me, Ph, p-MeC₆H₄, or p-ClC₆H₄, X = NH₂, MeNH, or OH, X' is NH₂, OH, an arylsulfonyl, arylamino, or arylsulfonylamino group, and Y is one or more substituents from the group OH, NH₂, NO₂, MeSO₂, PhSO₂. 2-Chloroanthraquinone (II) (50 parts) and 47 parts 91.1 p-MeC₆H₄SO₂Na in 200 parts HCONMe₂ refluxed 6 hrs. yielded 63.3 parts I (R = p-Me-C₆H₄, X

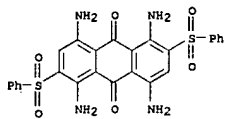
X' = Y = H), m. 212-13°. II (50 parts) and 42 parts 91.81 PhSO₂Na (III) gave similarly 68.8 parts I (R = Ph, X = X' = Y = H) (IV). II (25 parts), 25 parts III, and 75 parts Me₂SO refluxed 2 hrs. yielded 29 parts IV. II (25 parts) and 43 parts 32.1 MeSO₂Na in 100 parts HCONMe₂ refluxed 4 hrs. yielded 25.4 parts I (R = Me, X = X' = Y = H), m. 236-7°. 1,4-Diamino-2-bromoanthraquinone (V) 63, III 40, and HCONMe₂ 250 parts refluxed 6 hrs. gave 66.2 parts I (R = Ph, X = X' = NH₂, Y = H) (VI); it dyes Ia and cellulose triacetate fabrics reddish blue shades. 1-Amino-2-bromoanthraquinone 60, III 56, and HCONMe₂ 300 parts gave similarly 69.5 parts I (R = Ph, X = NH₂, X' = Y = H); it dyes reddish yellow shades. Similarly were prepared from the appropriate haloanthraquinones the following I (R, X, X', Y, or name of compound, 1 yield, and shade of dyeing given): Ph, H, H, 5-NH₂, 75, yellow-red; Ph, NH₂, OH, H, 87, bluish red; Ph, NH₂, MeO, H, --, blue-red; Me, NH₂, EtO, H, blue-red; Ph, NH₂, PhSO₂, H, 89.5 (m. 225-7°), reddish yellow; Ph, NH₂, p-MeC₆H₄SO₂, H, 83.5, light red; Ph, NH₂, NH₂, 5-NO₂, 83, blue; 2 (and 3)-Ph, NH₂, NH₂, 3 (and 2)-Br, --, blue; Ph, NH₂, NH₂, 5-NH₂, 86.5, light blue; 2 (and 3)-Ph, NH₂, NH₂, 5-NH₂ and 3-PhSO₂, --, blue; Ph, NH₂, OH, 3-PhSO₂, 5-NH₂, and 8-OH, 86.5, blue; Ph, NH₂, H, 3-PhSO₂, 8-NH₂, and 5-OH, 91, blue; Ph, MeNH, H, H, 82.5, reddish yellow; Ph, NH₂,

p-MeC₆H₄NH₂, H, 90, greenish blue; Ph, OH, OH, H, 85.5, yellow; Ph, H, H, 3-NH₂, 91.5, yellow; Ph, H, H, PhSO₂, 86.5 (m. 349-51°), --; 1,5-diamino-2,4,6,8-tetrakis(phenylsulfonyl)anthraquinone, 88, -- (red prisms, m. 337-8°); Ph, H, H, MeSO₂, 84, -- (m. 317-18°); Ph, NH₂, NH₂, 3-PhSO₂, 71.5, reddish blue; 1,5-diamino-4,8-dihydroxy-2,6-bis(phenylsulfonyl)anthraquinone (VII). 90, blue; 6-MeSO₂ analog of VII, 86, light blue; 6-Br analog of VII, --, blue; 1,5-diamino-4,8-dihydroxy-

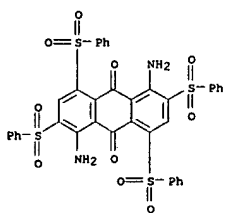
L4 ANSWER 56 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN (Continued)



RN 5268-60-0 CAPLUS
 CN Anthraquinone, 1,4,5,8-tetraamino-2,6-bis(phenylsulfonyl)- (7CI, 8CI)
 (CA INDEX NAME)



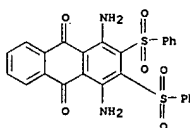
RN 5375-61-1 CAPLUS
 CN Anthraquinone, 1,5-diamino-2,4,6,8-tetrakis(phenylsulfonyl)- (7CI, 8CI)
 (CA INDEX NAME)



L4 ANSWER 56 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN (Continued)
 2 (or 3)-phenylthio-6 (or 7)-phenylsulfonylantraquinone (VIII), 82, blue; 6 (or 7)-MeSO₂ analog of VIII, --, blue; 2 (or 3)-HOCH₂CH₂S analog of VIII, --, blue; 1,5-diamino-4,8-dihydroxy-2 (or 3)- (2-hydroxyethylthio)-6 (or 7)-methylsulfonylantraquinone, --, blue; 2 (or 3)-PhSO₂ analog of VIII, 87.5, blue; 1,8-diamino-4,5-dihydroxy-2 (or 3), 6 (or 7)-bis(methylsulfonyl)-anthraquinone, --, blue; 1,8-diamino-4,5-dihydroxy-2 (or 3)-phenylsulfonyl-6 (or 7)-methylsulfonylantraquinone (IX), --, blue; 6 (or 7)-Br analog of IX, 81, blue; 2 (or 3)-MeSO₂ analog of IX, --, blue; 1,4,5,8-tetraamino-2,6-bis(phenylsulfonyl)anthraquinone (X), 91, blue; 2,6-bis(methylsulfonyl) analog of X, --, blue; 6-MeSO₂ analog of X, 88, blue; 6-Br analog of X, 87, blue; 6-bromo-2-ethylsulfonyl analog of X,

82, blue; Ph, H, H, 3-AcNH (m. 266-7°), 85, --; Ph, H, H, 5-BzNH (XI), 91, yellow; 6-MeSO₂ analog of XI, --, yellow; Ph, NH₂, p-MeC₆H₄SO₂NH, H, 99, --; p-ClC₆H₄, NH₂, p-MeC₆H₄SO₂NH, H, 95.6, -- (violet needles); p-ClC₆H₄, NH₂, 5-NO₂, 96.5, --. II24, Na 1-anthraquinonylsulfinate 30, and HCONMe₂ 150 parts refluxed gave 40.4 g. yellow 2-(1-anthraquinonylsulfonyl)anthraquinone. 5268-56-4P, Anthraquinone, 1,4-diamino-2,3-bis(phenylsulfonyl)- 5268-57-5P, Anthraquinone, 1,5-diamino-4,8-dihydroxy-2,6-bis(phenylsulfonyl)- 5268-60-0P, Anthraquinone, 1,4,5,8-tetraamino-2,6-bis(phenylsulfonyl)- 5375-61-1P, Anthraquinone, 1,5-diamino-2,4,6,8-tetrakis(phenylsulfonyl)- RL: PREP (Preparation)

RN 5268-56-4 CAPLUS
 CN Anthraquinone, 1,4-diamino-2,3-bis(phenylsulfonyl)- (7CI, 8CI) (CA INDEX NAME)



RN 5268-57-5 CAPLUS
 CN Anthraquinone, 1,5-diamino-4,8-dihydroxy-2,6-bis(phenylsulfonyl)- (7CI, 8CI) (CA INDEX NAME)

L4 ANSWER 57 OF 60 CAPLUS COPYRIGHT 2006 ACS ON STN

ACCESSION NUMBER: 1964:91460 CAPLUS
 DOCUMENT NUMBER: 60:91460
 ORIGINAL REFERENCE NO.: 60:16028g-h, 16029a
 TITLE: Phenylthio-1,5-diamino-4,8-dihydroxyanthraquinone disperse dyes
 PATENT ASSIGNEE(S): J. R. Geigy A.-G.
 SOURCE: 21 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 627092		19630715	BE	
PRIORITY APPLN. INFO.:		CH		19620112

GI For diagram(s), see printed CA Issue.

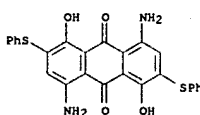
AB Halogenated or sulfonated derivs. of 1,5-diamino-4,8-dihydroxyanthraquinone (I) are treated with a thiophenol to give dyes of the formula II, where A is Ph or a substituted phenyl group; and X is S

or SO₂, which dye polyesters is fast blue shades. Thus, 21.5 parts brominated I is added to an anhydrous mixture of 200 parts PhSH and 10.5 parts K₂CO₃, the mixture is heated 3 hrs. at 180°, and extracted with dilute NaOH to give 3,7-bis(phenylthio)-1,5-diamino-4,8-dihydroxyanthraquinone, which gives neutral blue shades on polyesters. Similarly prepared are the following blue II (n = 1, X = S) (A given): p-tolyl, Ph, 2,4-Cl₂C₆H₃, BrC₆H₄. II (n = 1, X = S, A = Ph) is treated with CrO₃ in HOAc to give

II (n = 1, X = SO₂, A = Ph), reddish blue on polyesters and nylon.

IT 95950-97-3P, Anthraquinone, 4,8-diamino-1,5-dihydroxy-2,6-bis(phenylthio)- RL: PREP (Preparation)

(preparation of)
 RN 95950-97-3 CAPLUS
 CN 9,10-Anthracenedione, 4,8-diamino-1,5-dihydroxy-2,6-bis(phenylthio)- (9CI)
 (CA INDEX NAME)



L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1962:469779 CAPLUS
 DOCUMENT NUMBER: 57:69779
 ORIGINAL REFERENCE NO.: 57:13934b-f
 TITLE: Anthraquinone dyes free from water-solubilizing groups
 INVENTOR(S): Anon.
 PATENT ASSIGNEE(S): Ciba Soc.
 SOURCE: 30 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 609673		19620427	BE	
CH 398843			CH	
DE 1183189			DE	
GB 965006			GB	
PRIORITY APPLN. INFO.:			CH	19601028

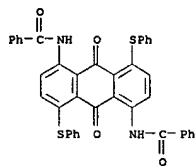
GI For diagram(s), see printed CA Issue.
 AB Water-insol. anthraquinone derivs. of the general formula I, containing 21 arylthio group are vat dyes for cotton or disperse dyes for poly(ethylene terephthalate). For example, 220 parts PhSH, 7000 vols. EtOH, 125 parts KOH, and 257 parts 1-amino-5-chloroanthraquinone were heated on a boiling water bath for 15 hrs. with stirring to give a 90% yield of 1-amino-5-phenylthioanthraquinone which dyes cellulose esters and polyester fibers golden yellow shades of good fastness. Similarly, other I were prepared (X, X', Y, Y', and color given): NH₂, PhS, NH₂, PhS, blue: NH₂, PhS, NH₂, H, ruby red; NH₂, H, 2-H₂NC₆H₄S, H, golden yellow; Cl, H, PhS, H, lemon yellow; Cl, Cl, PhS, H, - NO₂, H, PhS, H, greenish yellow; OH, OH, PhS, H, orange; OH, PhNH, PhS, OH, dark blue; PhS, PhS, NH₂, H, pink; OH, PhS, OH, PhS, navy blue; PhCH₂NH, H, PhS, H, orange; BzNH, H, PhS, H, yellow; p-O₂NC₆H₄CONH, H, PhS, H, yellow; PrCONH, H, PhS, H, yellow; BzNH, PhS, BzNH, PhS, blue-violet; p-PhC₆H₄CONH, H, PhS, H, yellow; p-O₂NC₆H₄CONH, PhS, p-O₂NC₆H₄CONH, PhS, red violet; BzNH, PhS, BzNH, H, red brown; PrCONH, PhS, PrCONH, PhS, violet; p-RNHC₆H₄CONH (R is 4-amino-6-chloro-s-triazin-2-yl), H, PhS, H, yellow; R'NH (R' is 4,6-dichloro-s-triazin-2-yl) H, PhS, H, yellow; R''NH (R'' is 4-chloro-6-phenyl-s-triazin-2-yl), H, PhS, H, yellow; and NCS, H, PhS, H, yellow. Also prepared was 7-phenylthio-6H-anthra [9,1-cd] isothiazol-6-one, a yellow dye.
 IT 82188-16-7P, Anthraquinone, 1,5-diamino-4,8-bis(phenylthio)- 96765-91-2P, Anthraquinone, 1,5-bis(p-nitrobenzamido)-4,8-bis(phenylthio)- 96765-99-0P, Anthraquinone, 1,5-dibenzamido-4,8-bis(phenylthio)- 106303-54-2P, Butyramide, N,N'-(4,8-bis(phenylthio)-1,5-anthraquinonylene)bis- RL: PREP (Preparation) (preparation of)
 RN 82188-16-7 CAPLUS

L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

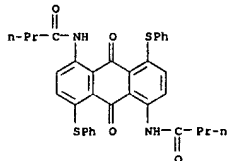
PAGE 2-A



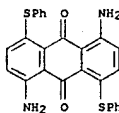
RN 96765-99-0 CAPLUS
 CN Anthraquinone, 1,5-dibenzamido-4,8-bis(phenylthio)- (7CI) (CA INDEX NAME)



RN 106303-54-2 CAPLUS
 CN Butyramide, N,N'-(4,8-bis(phenylthio)-1,5-anthraquinonylene)bis- (7CI) (CA INDEX NAME)

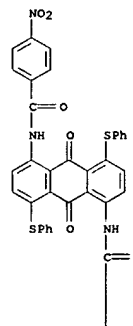


L4 ANSWER 58 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 9,10-Anthracenedione, 1,5-diamino-4,8-bis(phenylthio)- (9CI) (CA INDEX NAME)



RN 96765-91-2 CAPLUS
 CN Anthraquinone, 1,5-bis(p-nitrobenzamido)-4,8-bis(phenylthio)- (7CI) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1960:71463 CAPLUS
 DOCUMENT NUMBER: 54:71463
 ORIGINAL REFERENCE NO.: 54:13667d-f
 TITLE: Anthraquinonesulfonate dyes. X. 1-Amino-2-sulfo-4-aryloxy-, -4-arylthioanthraquinone, 1,5-diamino-2-sulfo-4,8-bis(arylamino)-, -4,8-bis(aryloxy)-, and 4,8-bis(arylthio)anthraquinones

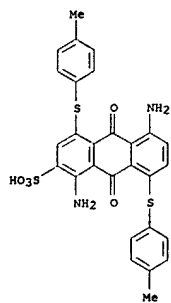
AUTHOR(S): Degani, J.; Tundo, A.
 CORPORATE SOURCE: Bologna Univ., Italy
 SOURCE: Bollettino Scientifico della Facolta di Chimica Industriale di Bologna (1959), 17, 55-9
 CODEN: BSPCAY; ISSN: 0366-3205
 DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

AB 1-Amino-2-sulfo-4-bromoanthraquinone was condensed with PhOH or PhSH or one of their various Me, OMe, Cl, or OEt derivs. to give dyes for wool and silk. Similarly, 1,5-diamino-2-sulfo-4,8-dibromoanthraquinone was condensed with phenols, thiophenols, or aniline or its derivs. The monoaryloxy derivs. dye the materials orange and orange-red, the monoarylthio derivs. dye red-violet, and the bis(aryloxy) or -thio derivs. extend the range to blue. The wash- and lightfastness of the monoarylthio derivs. are greater than those of the monoaryloxy derivs.

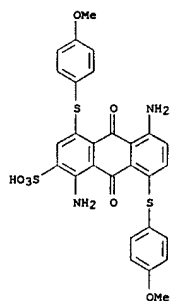
IT 103162-30-7P, 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-tolylthio)- 103162-32-9P, 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-methoxyphenylthio)- 103167-13-1P, 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-chlorophenylthio)- 103167-59-5P, 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(phenylthio)- 103329-43-7P, 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-ethoxyphenylthio)- RL: PREP (Preparation) (preparation of)

RN 103162-30-7 CAPLUS
 CN 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-tolylthio)- (6CI) (CA INDEX NAME)

L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

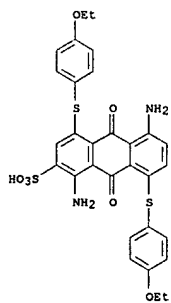


RN 103162-32-9 CAPLUS
 CN 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-methoxyphenylthio)- (6CI) (CA INDEX NAME)

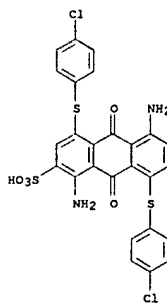


RN 103167-13-1 CAPLUS
 CN 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-chlorophenylthio)- (6CI) (CA INDEX NAME)

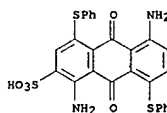
L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 59 OF 60 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 103167-59-5 CAPLUS
 CN 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(phenylthio)- (6CI) (CA INDEX NAME)



RN 103329-43-7 CAPLUS
 CN 2-Anthraquinonesulfonic acid, 1,5-diamino-4,8-bis(p-ethoxyphenylthio)- (6CI) (CA INDEX NAME)

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

302.41

475.57

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-44.25

-45.00

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 07:22:58 ON 15 DEC 2006